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Date May. 24. 1985.

Abstract

The focus of the study was to examine the relationship between adolescent deviance and life stress events. Two groups of deviant adolescents--institutionalized (n=60) and noninstitutionalized (n=42), and a comparison group of nondeviant adolescents (n=96) were studied. Deviant adolescents were further classified according to four personality types; two of the personality types--Conduct Problem (n=26) and Personality Problem (n=28) were present in sufficient numbers for further analysis. Multivariate analysis of variance, with age and socio-economic status as covariates and gender as a controlled factor, was used to compare the deviant/nondeviant groups and the personality groups on six variables. Two of the variables assessed number of life change events--within the past year and more than a year ago. Three variables were cognitive appraisals of the life change events according to level of emotional impact (upsetness), level of responsibility, and perceived coping ability. The sixth variable was a measure of locus of control. Significant differences ($\underline{p}<.01$) were found between deviant and nondeviant youth. Deviant youth experienced more life change events (both within the past year and more than a year ago) than nondeviant youth. Second, deviant youth appraised these events differently, e.g., they reported less emotional impact and better coping ability than nondeviant youth, and were more external on the locus of control measure. The institutionalized and noninstitutionalized groups differed on one variable only: the instititionalized group had experienced a greater number of life changes within the past year. Chi-square analysis of the life change events showed that the deviant and nondeviant youth differed significantly on 26 of 50 items at the .01 level. Within the deviant population there were significant differences between personality types, specifically in appraisals of life change events. The Conduct Problem (CP) youth reported significantly ($p<.01$) less emotional impact, less personal responsibility, and better coping ability than the Personality Problem (PP) youth. The PP youth were similar to the nondeviant adolescents in their appraisals of life change events. The CP and PP youth did not differ in types of life change events as determined by Chi-square analysis. The study supported the view that an increased number of life stress events (particularly of a negative nature) is associated with antisocial behavior in adolescence. Second, this study demonstrated that it is not only the number and type of events that are important, but also the perceptions or interpretation of these events: i.e., cognitive appraisals must be considered in understanding how adolescents deal with stress. Finally, the study confirmed previous research which has shown that deviant adolescents are not a homogeneous group and demonstrated how the CP and PP groups differed in their cognitive appraisals despite similar life experiences.

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CHAPTER I

INTRODUCTION

The literature on adolescent deviance presents a variety of sociological, psychological, and biological causal explanations. While many of the views expressed are supported by research, Andrew (1981) appears accurate in stating that we can only speak of "correlates" of delinquency at this stage of knowledge. Her review of the correlating factors is summarized in the following manner:

> Many factors have been identified as concomitants of vulnerability to delinquency. These tend to cluster into recurrent main themes of family rejection; neurological immaturity or damage; poor verbal/reading skills; particular stresses at adolescence; and maleness. (p. 139)

Of the factors listed by Andrew (1981), the one concerning "stresses at adolescence" was selected for investigation in this study. Although adolescence has often been described as a stressful period (Blos, 1962; Freud, 1958; Wolkind & Coleman, 1976), very little systematic research has been done in identifying the specific types or the frequency, of life stress events in adolescent deviant populations. One of the goals of the present research is to determine the relationship between adolescent antisocial behavior and life change (stress) events. A number of authors (e.g., Marohn, 1979; Schlesinger & Revitch, 1980) maintain that many adolescents deal with their emotional problems behaviorally. From this perspective, deviance can be viewed as a coping response to external and intra-psychic stress. It may also be that life stress events precipitate deviance in those adolescents already vulnerable due to other factors.

Heterogeneity of Adolescent Deviance

Research with deviant adolescents has demonstrated that they are not a homogeneous group (e.g., Genshaft, 1980; Jurkovic & Prentice, 1977; Lueger, 1980; Quay, 1979). The present study used the classification system devised by Quay and Parsons (1971) and Quay and Peterson (1979) to arrive at four different categorizations of deviant behavior: Conduct Problem, Personality Problem, Inadequacy-Immaturity, and Socialized Delinquency. The Conduct Problem dimension involves such characteristics as overt aggression, both verbal and physical; disruptiveness; negativism; irresponsibility; and defiance of authority. Adolescents who display these characteristics have generally been in difficulty since childhood and many come from family environments which have been described as rejecting (Henn, Bardwell, & Jenkins, 1980; Hetherington, Stouwie, & Ridberg, 1971; Jenkins, Nureddin, & Shapiro, 1966). The Personality Problem dimension involves overanxiety, social withdrawal, shyness, sensitivity, feelings of inferiority, and depression. Adolescents who display these characteristics often become deviant during the adolescent years and come from family environments which were described as having some parental conflict but where the mother is clearly the dominant figure (Genshaft, 1980; Hetherington et al., 1971). The Inadequacy-Immaturity dimension involves preoccupation, short attention span, passivity, and daydreaming. The Socialized Delinquency pattern includes gang activities, cooperative stealing, truancy, and other behaviours manifesting participation in a delinquent subculture. Of the four categories, the first two have the most support in the literature and are of central concern to the hypotheses of this research.

The present research investigated these personality dimensions in deviant adolescents from institutionalized and noninstitutionalized settings. The dimensions were also studied in relation to life change events, appraisals of life change events, and generalized expectancy of control.

Life Change Events, Cognitive Appraisals, and Locus of Control

The effect of life change events on physical and psychological functioning has been the focus of a considerable amount of research in the past two decades. The research evolved from the work of Adolph Meyer who created a "life chart" which provided a detailed description of a patient's social, personal, and biological histories; Meyer observed that psychiatric and physical disorders frequently followed a cluster of social and personal changes (Lief, 1948). Work in this area was also influenced by Hans Selye's writings on the physiological responses to stress (1956). Life change events came to be viewed as stressors which tax the adaptive functioning ability of the individuals. As a result, life change events were studied in relation to a variety of psychological and physical disorders (cf., Barrett, 1979; Depue, 1979; Dohrenwend & Dohrenwend, 1974; Rabkin & Struening, 1976; Rutter, 1981).

Most of the research has been done with adults and has shown a relationship between life change events and a variety of psychiatric disorders such as depression, neurosis, suicidal attempts, and acute schizoprenia (Andrews & Tennant, 1978; Brown & Harris, 1978; Lloyd, 1980; Paykel, 1978; Rutter, 1981). Only two studies are reported on the relationship of life change events to adult criminality (Ciccone &

Kaskey, 1979; Masuda, Cutler, Hein & Holmes, 1978). The criminals reported significant increases in life change events prior to their arrests.

Little systematic research has been conducted on the relationship of life change events to delinquent or antisocial behavior in adolescents. Vincent and Rosenstock (1979) reported that adolescent psychiatric patients had a greater magnitude of stressful life events prior to hospitalization than general hospitalized adolescents and normal adolescents. A large number of the adolescents in the study had been hospitalized for behavioral disorders. Other research (Andreasen & Wasek, 1980; Coddington, 1979; Gersten, Langer, Eisenberg & Orzek, 1974) showed that adolescents who have divorced or alcoholic parents, who have lost a boyfriend or girlfriend, or who have lost a parent through death are more likely to report feeling down and blue, to be truant, to engage in sex, or to be chronic runaways.

The sophistication of measurement instruments has not kept pace with the interest in this area. Only recently (Yeaworth, York, Hussey, Ingle, & Goodwin, 1980; Newcomb, Huba, & Bentler, 1981) have instruments been developed which attempt to assess life change events for adolescents, based on adolescent input concerning the stressfulness of these events.

Research on stress and life change events is correlational and largely retrospective. Studies which have failed to find relationships, or have found very small relationships, point to the need to consider other variables which might interact with life change events in their effect on physical and psychological disorders (e.g., Redfield & Stone, 1979; Tausig, 1982). Some of these mediating variables are: coping methods, support systems, cognitive appraisals, locus of control, self-esteem, and personality characteristics.

The present research examined cognitive appraisals of events and locus of control. An individual's cognitive appraisal of situations has been shown to be an important factor in both physical and psychological responses to situations (Lazarus, 1977; Weiner, 1980). It appears that it is not the event itself, but how the individual interprets the event that may be an important factor in understanding different coping responses. For the present research, subjects were asked to evaluate each life change event on three Likert-type response scales. The scales determined the degree to which the event was upsetting, the amount of personal responsibility assumed for each event, and how well the individual feels he/she copes with life stress events. These scales provide insight into the emotional impact of events and personal perceptions of responsibility and self-efficacy. In addition to these specific dimensions, a measure of generalized expectancy of control (locus of control) was given. In general, it has been found that delinquents are more externally controlled (Beck & Ollendick, 1976; Kumchy & Sayer, 1980; Martin, 1975; Obitz, Oziel, & Unmacht, 1973). That is, these adolescents feel that they have little personal control over the environment, perceiving that reinforcements are independent of their behavior.

Hypotheses

For the study it was expected that deviant adolescents could not be treated as a homogeneous group on the basis of violation of society's norms. While type of offense might be a useful distinction, it appeared that there was validity to identifying certain basic personality or behavioral patterns as a means of differentiating these youth. Of particular interest to the present study was the distinction between the Conduct Problem type and the Personality Problem type of deviant, as identified by Quay and Parsons (1971). It was expected that while deviant adolescents would in general have more life change events than a nondeviant population, differences would also exist within the deviant group: those adolescents scoring higher on the Personality Problem dimension would have more recent life change events and would perceive these events as more upsetting, feel more personally responsible, and feel less adequate in handling these situations than those adolescents scoring higher on the Conduct Problem dimension. The latter group would tend to project responsibility to others and deny the impact of the events. Similarly, with locus of control, it was expected that deviant adolescents would be more externally controlled than nondeviants, but that the Conduct Problem type would be the most externally controlled.

The study is important in helping to identify subgroups of delinquents in the hope of suggesting differential treatment strategies based on these differences. For example, the Personality Problem type should be most responsive to nondirective therapy which aims at some resolution of the emotional impact of some of these life events, while the Conduct Problem group might be more responsive to directive therapy which focuses on applying reinforcements and consequences for behaviors. Also, it appears that this research can be useful in identifying youth at risk in the general population.

Summary

This study examined two major groups of deviant adolescents: institutionalized and noninstitutionalized, as well as a comparison group of adolescents who were not exhibiting behavioral problems. The samples included male and female adolescents ranging in age from 11 to 18 years. These groups were compared on the following measures: life change events, cognitive appraisals of life change events, and locus of control.

Further, the deviant adolescents were classified acccording to four major personality patterns: Conduct Problem, Personality Problem, Inadequacy-Immaturity, and Socialized Delinquency. The Conduct Problems and Personality Problem groups were then compared on life change events, cognitive appraisals, and locus of control.

CHAPTER II

REVIEW OF THE LITERATURE

This study examined the nature of adolescent deviance in relation to personality factors, life change events, and cognitive appraisals. In particular, the study focused on adolescents who displayed a variety of social, emotional, and behavioral problems, but who were generally classified as "antisocial" or "behavior disordered".

Behavior problem adolescents may or may not be delinquent in the legal sense of the term, but generally exhibit behaviors which come into conflict with the rules or conventions of home, school, or community. Seemingly, these behaviors present more of a problem for others than for the particular adolescent; they may or may not be viewed as problematic or conflictual for the adolescent. The behaviors include a variety of acts such as truancy, running away, staying out late, persistent stubborness or disobedience, alcohol/drug abuse, and sexual immorality, which are termed status offenses by the legal system, as well as behaviors representative of criminal activities, e.g., theft, assault, break and entry. Should these behaviors come to the attention of the legal system, the adolescent will be labelled "delinquent", whereas the medical profession may assign the label "conduct disorder", and social service agencies or educational institutions may use the phrases "acting out" or "disturbed". Therefore, the label assigned and the institutions where one might find these adolescents are more a function of the system and the particular socio-cultural environment in which the adolescent lives than the particular behaviors displayed.

Definitional and Classification Issues

An exploration of the literature reveals that a variety of classification systems exist from which to view adolescent pathologies and problems. Also, there are differences in definitions as to what constitutes delinquent behavior. Thirdly, there is often uncertainty concerning which behaviors are signals for long-standing future problems and which are a natural part of the adolescent process or stage of development. To a large extent this uncertainty reflects the varied views about the nature of adolescent development.

Blos (1962) defines adolescence as a process of psychological adaptation to the condition of pubescence. Wolkind and Coleman (1976) regard it as a "stage of life during which the major experience is one of transition and change . . . the time during which the individual experiences the greatest change in every area of life" (p. 575). Wolkind and Coleman (1976) describe some of the psychological changes which accompany the biological changes. These include: intellectual growth in the form of abstract thinking abilities (formal operations), and emotional needs which require both security and independence. Framrose (1977) emphasizes the maturational tasks adolescents face in the areas of social, sexual, occupational, and moral functioning, as they go through the process Erikson (1968) calls "identity formation". Framrose (1977) defines disorders as arrests or hurried foreclosures of these maturational tasks.

One continuing source of debate is whether adolescence by its nature is a time of "storm and stress". Writers such as Blos (1962) and Freud (1958) argue for "turmoil" and "chaos" as a characteristic feature of adolescence. Geleerd (1961) states, "Personally I would feel greater concern for the adolescent who causes no trouble and feels no disturbance" (p. 394). This attitude has been described as one of the myths of adolescence by Mitchell (1979) and has been criticized as helping to produce a self-fulfilling prophecy (Anthony, 1969). A number of large scale studies (Offer, 1969; Rutter, Graham, Chadwick & Yule 1976; Wilmott, 1966), conclude that most adolescents and their parents do cope quite well with this stage of development and that severe difficulties are conspicuous by their absence. Therefore, the turmoil and upheaval which is so characteristic of most views of adolescence seems to be true for some, but not all adolescents.

Despite different perspectives and emphases, one of the primary tasks of clinicians and researchers is to refine methods of identification and treatment for those adolescents who do not outgrow their problem behaviors. Marohn states:

> If we know one thing about adolescence, we know that many teenagers express their emotional problems in behavioral symptoms and not necessarily in diagnosable psychiatric illness. It is in the nature of the adolescent to externalize, to act. (1979, p. 427).

There is research which supports this view in showing that those considered to be behavior problems in childhood or adolescence, may in adulthood adopt a "criminal" role (Mitchell and Rosa, 1981, Moore, Chamberlain, and Mukai, 1979; Robins, 1966; Robins and O'Neal, 1959), or a "sick" role in the form of psychiatric disorders (Balla, Lewis, Shanok, Sneel, and Henisz, 1974; Russell and Hardman, 1980).

There are a variety of views as to what constitutes delinquent behavior. Legally, the criterion is any violation of the provisions of the justice system by a child under the age of sixteen. The Juvenile Delinquents Act of Canada (Revised Statutes of Canada, 1970) states:

> "Juvenile delinquent" means any child who violates any provision of the Criminal Code or of any federal or provincial statute, or of any by-law or ordinance of any municipality, or who is guilty of sexual immorality or any similar form of vice, or who is liable by reason of any other act to be committed to an industrial school or juvenile reformatory under any federal or provincial statute. (Chap. J-3)

Therefore, by the legal definition, one violation can make an adolescent a delinquent.

Gold and Petronio (1980) define delinquency as ". . . behavior by a juvenile that is in deliberate violation of the law and is believed by the juvenile to make him or her liable to adjudication if it comes to the attention of the law" (p. 497). Mistaken violations or technical violations which are never actually enforced, e.g., smoking tobacco, are not included in this definition, but the definition does include undetected delinquency.

Glueck and Glueck (1970) emphasize the repeated nature of the acts in the definition of delinquency as:

> . . . repeated acts of a kind which, when committed by persons beyond the statutory juvenile court age of sixteen, are punishable as crimes (either felonies or

> misdemeanors)--except for a few instances of persistent stubbornness, truancy, running away, associating with immoral persons and the like. (p. 4)

The most widely used classification system in the clinical field is the American Psychiatric Diagnostic and Statistical Manual (DSM-III) (1980). DSM-III classifies delinquency under a category called Conduct Disorders. The general characteristics of this group of disorders are:

> The essential feature is a repetitive and persistent pattern of conduct in which the basic rights of others or major age-appropriate societal norms or rules are violated. The conduct is more serious than the ordinary mischief and pranks of children and adolescents. Four specific subtypes are included: Undersocialized, Aggressive; Undersocialized, Nonaggressive; Socialized, Aggressive; and Socialized, Nonaggressive. These subtypes are based on the presence or absence of adequate social bonds and the presence or absence of a pattern of aggressive antisocial behavior. (1980, p. 45)

While this is the major category for classification, antisocial or acting out behaviour may also be associated with other categories such as: Adjustment Disorders (with Disturbance of Conduct or Mixed Disturbance of Emotions and Conduct), Identity Disorders, Mental Retardation, Attention Deficits, Specific Developmental Disorders, Oppositional Disorders. Using the DSM-III one must make a differential diagnosis based on whether the behavior is transient, e.g., maladaptive reaction to an identifiable psychosocial stressor, or persistent, and in terms of the primary disorder versus possible associated features. Although DSM-III is the most widely used classification system, Quay (1979) cites a number of other systems for classifying psychopathological disorders, e.g., World Health Organization (WHO), International Classification of Diseases (ICD-9), Group for the Advancement of Psychiatry.

In addition to clinical classification systems, a number of researchers have used multivariate statistical procedures to identify characteristics which differentiate adolescents with problems. As Quay (1979) points out, systems such as DSM-III are categorical and are used to classify individuals. Conversely, the factors identified with the statistical methods are dimensional and describe a total population.

Factor analysis has been the statistical approach which has been used to isolate patterns of behavior. One of the earliest attempts was the work of Hewitt and Jenkins (1946). They analyzed the records of 500 children referred to a child guidance clinic. They identified three primary behavioral syndromes which they labelled Unsocialized-Agressive, Socialized Delinquent, and the Overinhibited Child.

Peterson (1961) attempted to get an adequate sampling of behaviors of children which could be considered deviant. He analyzed 400 representatively selected case folders from a child guidance clinic and identified 58 items of deviant behaviors which were compiled into a checklist. Teachers of 831 grade school children rated their children on the checklist. Peterson identified two separate factors, which he called "Conduct Problem" and "Personality Problem". These two factors could account for the vast majority of behaviors in school children. Also, each child could be placed on each dimension according to the number of problem behaviors demonstrated on that particular dimension. Differences between children were a matter of degree.

The two factors (Conduct Problem and Personality Problem) have been variously named, but have been repeatedly identified in numberous studies employing different measurement instruments and different populations. These factors, sometimes referred to as broad factors (Dreger, 1980) or the internalizing versus the externalizing factor (Edelbrock and Achenbach, 1980), have been identified through such instruments as: Adolescent Behavioral Classification Project (ABCP) (Dreger, 1980); Adolescent Symptom Checklist (Kohn, Koretzky, and Haft, 1979); Louisville Behavior Checklist (LBC) (Miller, 1980); Behavior Problem Checklist (BPC) (Quay and Peterson, 1979). Using a checklist format, these studies have used teachers, parents, and clinicians as raters.

The factors described above have generally been regarded as behavioral indicators of basic personality types. The Conduct Disorder or externalizing pattern describes an individual whose personal needs take precedence over the need of others. Associated with this configuration is often a display of violence and aggressiveness, defiance and noncompliance with social or legal norms and educational demands (see Table 1). The Personality Problem (also referred to as Anxiety-Withdrawal) or internalizing pattern is characterized by a neurotic style of behavior; there is a reluctance to participate in interpersonal relationships and an overall lack of confidence and self-worth (see Table 2).

Two other factors which are less robust but have also received

Table 1

Frequently Found Characteristics Defining Conduct Disorder

Characteristic	Total Number of Studies
Fighting, hitting, assaultive	26
Temper tantrums	24
Disobedient, defiant	23
Destructiveness of own or other's property	22
Impertinent, "smart" impudent	18
Uncooperative, resistive, inconsiderate	17
Disruptive, interrupts, distrubs	16
Negative, refuses direction	15
Restless	15
Boisterous, noisy	15
Irritability, "blows-up" easily	15
Attention-seeking, "show-off"	14
Dominates others, bullies, threatens	14
Hyperactivity	12
Untrustworthy, dishonest, lies	12
Profanity, abusive language	10
Jealousy	10
Quarrelsome, argues	10
Irresponsible, undependable	9
Inattentive	8
Steals	8
Distractibility	7
Teases	7
Denies mistakes, blames others	4
Pouts and sulks	4
Selfish	4

Note. From Psychopathological disorders of childhood (2nd ed.). by H. C. Quay and J. S. Werry (Eds.), 1979, New York: John Wiley & Sons.

Table 2

Frequently Found Characteristics Defining Anxiety-Withdrawal

Characteristic	Total Number of Studies
Anxious, fearful, tense	21
Shy, timid, bashful	19
Withdrawn, seculsive, friendless	19
Depressed, sad, distrubed	16
Hypersensitive, easily hurt	15
Self-conscious, easily embarassed	13
Feels inferior, worthless	12
Lacks self-confidence	10
Easily flustered	10
Aloof	8
Cries frequently	7
Reticent, secretive	7

Note. From Psychopathological disorders of childhood (2nd ed.). by H. C. Quay and J. S. Werry (Eds.), 1979, New York: John Wiley & Sons.

support in the literature are "Immaturity" (also referred to as Inadequacy-Immaturity), and a "Socialized-Aggressive" factor (also referred to as Socialized Delinquency). Tables 3 and 4 provide descriptions of these factors.

The four factors, conduct disorder, personality problem, immaturity, and socialized-delinquency have been shown to be characteristic of delinquent adolescents as well (Peterson, Quay, and Tiffany, 1961; Quay, 1964, 1966), and a classification system for offenders has been developed from them (Quay and Parson, 1971; Quay and Peterson, 1979).

The present research will be incorporating the system developed by (Quay and Parsons, 1971; Quay and Peterson, 1979). The following section provides a discussion of research utilizing the concept of a heterogeneous classification system for delinquents.

Research on the Heterogeneity of Delinquents

Achenbach and Edelbrock (1978) conducted an extensive review of the classification systems for child psychopathology (adolescents included), and are of the opinion that despite differences in checklists, subjects, populations, types of raters, and methods of analysis, behavior checklists have shown considerable convergence in the behavioral syndromes identified in various studies. They also recommend that researchers use present instruments that are available along with any new ones created, in order that research can be compared and some systematic results obtained.

In assessing the various instruments, Achenbach and Edelbrock state:

> There are several instruments for which a considerable body of data exists on substantial samples. Among those

Table 3

Frequently Found Characteristics Defining Immaturity

Characteristic	Total Number of Studies
Short attention span, poor concentration	13
Daydreaming	12
Clumsy, poor coordination	11
Preoccupied, stares into space, absentminded	9
Passive, lack initiative, easily led	8
Sluggish	8
Inattentive	7
Drowsy	6
Lack of interest, bored	5
Lacks perseverance, fails to finish things	5
Messy, sloppy	3

Note. From *Psychopathological disorders of childhood* (2nd ed.). by H. C. Quay and J. S. Werry (Eds.), 1979, New York: John Wiley & Sons.

Table 4

Frequently Found Characteristics Defining Socialized-Aggressive Disorder

Characteristic	Total Number of Studies
Has "bad companions"	4
Steals in company with others	4
Loyal to delinquent friends	3
Belongs to a gang	3
Stay out late at night	3
Truant from school	3
Truant from home	2

Note. From *Psychopathological disorders of childhood* (2nd ed.). by H. C. Quay and J. S. Werry (Eds.), 1979, New York: John Wiley & Sons.

> for which only broad-band syndromes have been obtained, the most prominent are the BPC [Quay & Peterson, 1979] for use by a wide variety of raters. The TRF (Clarfield, 1974) for use by elementary school teachers, and the Kohn Symptom Checklist and Social Competence Scale (Kohn & Rosman, 1972) for use by preschool teachers (1978, p. 1296).

Quay and Parsons (1971) developed a classification system for juvenile offenders which utilizes three instruments: the Behavior Problem Checklist (BPC) (revised Quay & Peterson, 1979); the Personal Opinion Study (POS) (self-report questionnaire); and the Checklist for the Analysis of Life History Data (CHS). Classification is based on the three instruments, but research studies have often used only one of the first two instruments as they can be used independently. The BPC has four factor dimensions: Conduct Problem, Personality Problem, Inadequacy-Immaturity, and Socialized Delinquency, as well as four "flag" items for psychotic behavior. These four dimensions basically correspond to the characteristics shown in Tables 1, 2, 3, and 4 respectively. The POS contains three dimensions--Conduct Problem (Unsocialized-Psychopathic), Personality Problem (Neurotic-Disturbed), and Socialized Delinquency (Socialized-Subcultural). The CHS assesses all four dimensions, being quite similar to the BPC. Whereas the BPC is used to rate the present behavior of the adolescent, the CHS is used to assess past information.

Research on the Quay and Parsons Classification System

Using the classification system developed by Quay and Parsons (1971), it has been possible to differentiate delinquents on a number of variables, according to personality type. For example, Jurkovic (1980) and Bear and Richards (1981) showed that only the conduct problem group was significantly different in level of moral reasoning from the nondelinquent group; delinquents classified into the personality problem and socialized delinquency categories did not differ in level of moral reasoning from the nondelinquent group.

In a related area of study, Hecht and Jurkovic (1978) used all three instruments of the Quay system (POS, BPC, and CHS) to compare differences on the Wechsler scales. They found significantly low Comprehension subtest scores for the conduct problem group. As the Comprehension subtest assesses sociomoral reasoning, the results were consistent with previous studies which indicated the more primitive mode of reasoning displayed by conduct problem youth.

Lueger (1980) used the Behavior Problem Checklist (BPC) to examine the transgression behavior of adolescents under high-arousal and control situations. The results revealed that more of those in the high-arousal than in the control group situation transgressed. Secondly, those who transgressed had higher scores on the conduct problem and socialized delinquency scales but not on the personality problem or inadequacy-immaturity scales. The transgression behavior of the personality problem group varied across the high-arousal and control situations, whereas the conduct problem group did not. This study pointed to the conduct problem youth's general lack of conformity and inability to self-regulate behavior independent of the situation.

Genshaft (1980) compared the three subtypes of the POS (Personal Opinion Study): neurotic-disturbed (personality problem), unsocialized-psychopathic (conduct problem), and socialized subcultural (socialized delinquent), and the MMPI with a group of legally adjudicated male juvenile delinquents. The two instruments supported each other and resulted in two major personality types: a conflicted weak ego type with considerable intrapsychic conflict, and a more traditional psychopathic type with little apparent anxiety or neurotic symptomology. As might be expected the neurotic delinquent group endorsed more items that dealt with feelings of worthlessness, unhappiness, social/personal alienation, and family struggles. The psychopathic group endorsed items which suggested conflicts with authority and conformity, poor impulse control, and difficulty forming meaningful relationships. The socialized delinquent group endorsed items suggestive of greater social extroversion and the need to be liked. The study was replicated with a second sample of delinquents within their first month of incarceration.

Genshaft (1980) indicates that the Personality problem group may be the most emotionally disturbed and that it differed most from the other two groups. This group, while having difficulties in school and engaging in acting out behaviors, also manifests many neurotic behaviors. In describing this group Genshaft states:

> These youth are considered self-defeating in their behaviors and are thought to feel hopeless but to have resilient ego defenses. They are unhappy youngsters, often anxious and mildly depressed. They cry frequently and may have such psychophysiological concomitants as anoerxia and sleeping disturbances. (1980, p. 283)

The conduct problem and socialized delinquent groups differed, but were more similar in their MMPI profiles. These latter two groups had school difficulties, chronic truancy, and more pronounced histories of acting out, but they presented less anxieties and feelings of inadequacy.

Lueger and Hoover (1984) attempted to replicate the Genshaft (1980) study using the Behavior Problem Checklist (BPC) instead of the Personal Opinion Study (POS). They did not find the relationship between the BPC and the MMPI which Genshaft (1980) found using the POS. Luegar and Hoover (1984) concluded that their results support others results which have shown that "the MMPI is not an effective discriminator of diagnostic categories for adolescent populations" (p. 1494).

Rankel (1980) also distinguishes personality problem adolescents from the conduct problem and the inadequacy-immaturity groups. She views the personality problem as more emotionally than behaviorally distrubed. Presenting her thesis from Dabrowski's theory of positive disintegration (Dabrowski, Kawczak, & Peichowski, 1970), it seems that the personality problem adolescents have the best prognosis for using their experiences for growth. These youth have the insight which affords a means of resolving and working through the inner conflicts. Unlike the personality problem group, the conduct problem group seems to lack the appropriate level of self-awareness and appears to respond better to direct, concrete consequences of actions.

Bernstein (1981), comparing groups of nondelinquent and delinquent males, found that the Personal Opinion Study (POS) did not differentiate the groups, appearing to be more a measure of deviance per se than delinquency. This emphasized the importance of using a comparison group of nondelinquents. He did find, however, that the conduct problem factor was related to developmental delays in self and peer perception while the personality problem factor was not. This study reiterated the conduct problem adolescent's general lack of self and social awareness.

Hetherington, Stouwie, and Ridberg (1971) studied groups of delinquent and nondelinquent adolescents (male and female) and their families. They used an earlier form of the Personal Opinion Study, called the Personality Questionnaire (1964) to classify the delinquents into unsocialized-psychopathic (conduct problem), neurotic-distrubed (personality problem), and socialized-subcultural (socialized delinquency) groups. They showed distinct differences in parental attitudes, patterns of dominance, and adolescent-parent interactions for the three adolescent groupings. They also found some differences based on gender. For example, both males and females from the unsocialized-psychopathic group came from families where the father was clearly dominant while for the neurotic-disturbed groups, the mother was the dominant figure. The families of the socialized-subcultural group most resembled those of nondelinquent families.

Studies have differentiated delinquents according to personality type on variables such as empathy (Ellis, 1982) and the relationship to marital discord (Emery & O'Leary, 1982; Porter & O'Leary, 1980).

The Behavior Problem Checklist has been used with a variety of special populations: e.g., aggressive, withdrawn, hyperactive, learning disabled, mentally retarded and deaf children, and has consistently shown good discriminant and predictive validity as well as the same factor pattern (Cullinan, Epstein, & Dembinski, 1979; Hirshoren & Schnittjer, 1979; Proger, Mann, Green, Bayuk, & Burger, 1975). Von Isser, Quay, and

Love (1980) have also shown that the BPC has good convergent validity.

Schuck, Dubeck, Cymbalisty, and Green (1972) compared the three Quay instruments (POS, BPC, & Case History Checklist) with the Neuroticism and Extraversion scales of the Eysenck Personality Inventory, the Forced-Choice Guilt Inventory and measures of institutionalized adjustment. Their subjects were 115 adjudicated male delinquents in a training school; 36 were Caucasians and 79 were non-Caucasians. Their results showed modest multitrait-multimethod validity for the personality problem and conduct disorder factors of the BPC and Case History Checklist. They reported poor validities for the socialized and inadequacy factors. Also, the Personal Opinion Inventory (Study) had the least predictive validity. This study seems to point out the need for using all three measurements in categorizing individuals, rather than relying on only one or two of the instruments. Schuck et al., (1972) also found the personality problem factor to be more a measure of emotional adjustment e.g., feelings of anxiety about self competency, feelings of rejection, than a measure of guilt, as this factor did not correlate with the guilt measure.

The studies presented above demonstrate that delinquents can be differentiated according to personality type on a number of variables. The exact nature of these relationships and the consistency of results has yet to be established. It is difficult to make meaningful comparisons in view of the diversity of samples and instruments utilized. It does appear, however, that attempting to further clarify the characteristics which differentiate delinquent adolescents is a useful direction for research.

Stress and Life Change Events

A great deal of research effort in the last two decades has been devoted to exploring the effects of stressful life events on physical and psychological functioning. Research in this area has received direction from the early work of Hans Selye on the physiological reactions, specifically in the adrenal-cortical pituitary axis, to noxious agents or stressors (1956).

Definitions of Stress and Life Change Events

Selye (1956) speaks of stress as the "rate of wear and tear in the body" (p. 3). More specifically, he defines it as the "state manifested by a specific syndrome which consists of all nonspecifically induced changes within the biologic system" (p. 54). Selye's later writings (1980, 1982) point out that stress related diseases may depend more on the way the individual reacts to the stressor, than the particular pathogen itself. He also distinguishes pleasant or curative stress (eustress) from distress which is unpleasant and disease producing. That is, not all forms of stress are to be avoided as some may be desirable and represent positive experiences.

Monat and Lazarus (1977) list three types of stress: systemic or physiological, psychological, and social. The first type refers to tissue systems (Selye's work emphasizes this type), the second to cognitive appraisals of threat, and the third to disruptions in the social unit. By this definition stress is a broad term which can be defined as "any event in which environmental demands, internal demands or both tax or exceed the adaptive resources of an individual, social system, or tissue system (p. 3). Similar views of stress are presented by Coffey and Appley (1964) and Novaco (1979).

Haggard's early definition of emotional stress is significant in addressing the complexity of the whole area of stress. Emotional stress is defined as:

> An individual experiences emotional stress when his over-all adjustment is threatened, when his adaptive mechanisms are severely taxed and tend to collapse. Some of the factors which influence an individual's ability to tolerate and master stress include: the nature of his early identifications and his present character structure, and their relation to the demands and gratifications of the present stress-producing situation; the nature of his reactions to the situation; his ability to master strong and disturbing emotional tensions; the extent to which he knows all aspects of the situation, so that he is not helplessly unaware of the nature and source of threat; his available skills and other means of dealing effectively with it; and the strength and pattern of his motivations to do so. (1949, p. 458).

Haggard's definition reflects some of the current issues in stress research which focus on identifying individual differences such as personality factors, interpretation of events, and methods of coping.

Despite the variety of definitions and ways of conceptualizing life stress events, there has been a great deal of interest in studying the relationship between various life change events which can be stressful and illness (both physical and psychological). The following section will discuss the research in this area.

Stress and Life Change Event Research

A large body of research has accumulated which demonstrates an association between various forms of psychological or physical disorder and life change or stress events (e.g., Barrett, 1979; Depue, 1979; Dohrenwend & Dohrenwend, 1974; Rabkin & Struening, 1976, Rutter, 1981). Also, in recognition of the importance of life stressors, DSM-III (1980) includes consideration of stressors in the diagnosis of psychological and psychiatric illnesses.

Most of the research in this area has been done with adults rather than children or adolescents. For example, there is support that in adults stressful life events play a significant role in the onset of suicide attempts (Isherwood, Adam, & Hornblow, 1982; Paykel, Prusoff, & Myers, 1975), depressive conditions (Brown & Harris, 1978; Lloyd, 1980; Hammen, 1978; Paykel, Myers, Dienelt, Klerman, Lindenthal, & Pepper, 1969; Paykel & Tanner, 1976; Uhlenhuth & Paykel, 1973), neurosis (Cooper & Sylph, 1973), and acute episodes of schizophrenia (Birley & Brown, 1970).

Research exploring this relationship with criminal populations is limited, but two studies (Ciccone & Kaskey, 1979; Masuda, Cutler, Hein, & Holmes, 1978) report significant relationships between criminality and recency/number of life change events prior to the time of arrest. The Ciccone and Kaskey study (1979) assessed a group of prisoners within seventy-two hours of their arrest, while Masuda et al., (1978) assessed inmates who had been incarcerated from two to five years. These authors concluded that prisoners have evolved a coping style which is essentially one of antisocial or criminal behavior.

Research with children and adolescents has been more limited, and this is particularly true for research with behavior problem adolescents. As Newcomb, Huba, & Bentler (1981) point out, "though adolescence seems a vulnerable period for exposure to life changes and stress, only a handful of studies have considered the effects of stressful life events in this important age period" (p. 400).

Research with children has generally shown a relationship between recent stress events and the occurence of physical as well as emotional disorder (Gersten, Langner, Eisenberg, Orzeck, 1974; Heisel Ream, Ratz, Rappaport, & Coddington, 1974; Mutter & Schliefer, 1966).

Sandler and Block (1979) found a significant relationship between adjustment problems of young inner city elementary children and stressful life events. Their study also indicated the need for considering moderating variables as the relationship did not exist for school-maladjusted children on welfare.

Hotaling, Atwell, and Linsky (1978) studied 118 college freshmen and found a significant relationship between life change events and illness. They reported that only undesirable and ambiguous events were related to illness not desirable events.

Hammen (1978) studied the interaction of life change events, depression, and cognitive distortion in college students. There was a significant effect for level of depression and amount of cognitive distortion. There was also a significant effect for life change scores and level of depression. Unexpectedly, among the depressed people, those with low life change distorted more than those with high life change. Possible explanations posited by the author was that there are two types of depressed individuals, one due to recent life changes and the other independent of events; secondly, those with recent life changes may not as yet have developed patterns of cognitive distortion as measured by the instrument.

Gad and Johnson (1980) studied 167 adolescents and found that regardless of race, those from lower socioeconomic classes experienced more negative life changes. These changes related to perceived health status and adjustment, but did not relate to amount of social support.

Hawton, O'Grady, Osborn and Cole (1982) found that adolescents who took overdoses had a greater number of distrubed family relationships and had made more frequent visits to the doctor for medical reasons than a control group of subjects.

Vincent and Rosenstock (1979) report that adolescent psychiatric patients have a greater magnitude of stressful life events when compared with general hospitalized adolescents and normal adolescents. The majority of the adolescents in this study had been classified as behavior disorders or adjustment reactions (only 5 of the 60 were viewed as borderline psychotic).

Simmons, Blyth, Van Cleave and Bush (1979) found that changing schools at seventh grade, beginning dating, becoming pubertal and being a girl, all contributed to greater adjustment problems. That is, girls who had begun menustrating, dating and junior high school, had lower self-esteem, more behavior problems and lower grades than girls who had not experienced these changes. Also, these girls had significantly more adjustment problems than boys.

There is also evidence that adolescents whose parents have divorced or are alcoholic, who have lost a boyfriend or girlfriend, or who have lost a parent through death are more likely to report feeling down, to be truant, to engage in sex, or to be chronic runaways (Andreasen & Wasek, 1980; Coddington, 1979; Gersten, Langner, Eisenberg, & Orzek, 1974).

Schlesinger and Revitch (1980) hold the view that many adolescent crimes are perpetuated by external stress. "The developing adolescent is more sensitive to stress than the adult and reacts behaviorally, whereas many adults react to stress somatically" (Schlesinger & Revitch, 1980, p. 179). Secondly, it seems that different stressors may have different effects. Felner, Stolberg, and Cowen (1975) found that bereaved children manifested largely timidity and withdrawal, while those of divorced or separated families showed aggressive antisocial behaviors.

The relationship of the "broken home" and unstable family situations has received a great deal of attention in the delinquency literature. The broken family unit has been cited as one of the many correlating variables with antisocial behavior and behavior problems (Rutter, 1971; Siegman, 1966; Tuckman & Regan, 1966). Gregory (1965) and Anderson (1968) report that delinquent adolescents are more likely to come from households in which there was absence of the same sex parent than nondelinquents. As Andrew's (1981) review points out however, there have been studies which have not found a relationship between broken homes and delinquency, and those which have found a relationship for female delinquency only. Although there are contradictory results, it appears that one of the pitfalls has been to treat broken homes as a homogeneous category, when in fact there are different types, e.g., divorced, bereaved. Similar to the results presented by Felner et al., (1975), Tuckman and Regan (1966) found that children from widowed families had a greater number of anxiety and neurotic symptoms, while those from divorced families displayed more antisocial behaviors. Melges and Bowlby (1969) in discussing parental bond disruption hypothesize that for depressives, the disruption is due to parental death, while for sociopaths (extreme case of delinquent character formation), disruption is due to general family disorganization (illegitmacy, divorce, and separation).

Other family factors which could conceivably be sources of stress to the adolescent and which have been related to delinquency are conflictual and unsatisfactory marriage relationships (Hetherington, Stouwie, Ridberg, 1971; Loeber & Dishion, 1984; McCord, 1979) and lack of parental affection or parental rejection (Andry, 1957; Glueck and Glueck, 1970; Loeber & Dishion, 1984; McCord, 1979).

Issues in Life Change Events Research

Dohrenwend and Dohrenwend (1978) question whether the relationship between life stress and illness is based on faith or scientific evidence. They argue that, at present, the view that life stress causes illness is based on faith, bolstered by some scientific evidence.

Evidence about the nature of the relationship between life stress and illness is both direct and indirect. Some of the indirect evidence comes from laboratory experiments with animals which were exposed to adverse conditions such as shock or frigid temperatures. These once healthy animals have been shown to develop physiological syndromes, e.g., ulcers, as well as psychological conditions such as learned helplessness (Seligman, 1975; Selye, 1956).

Other indirect evidence comes from the studies of effects of natural or man-made disasters, e.g., effects of tornadoes, combat conditions (e.g., Fritz & Marks, 1954; Swank, 1949). As Dohrenwend and Dohrenwend (1978) point out, some of the symptomology produced in previously normal people by extreme conditions seems to be transitory, unless these conditions are very severe such as experience in concentration camps.

More direct evidence is available from experiences which are more frequent and are experienced in the course of normal living e.g., changes in work and residence, death of a family member. As shown earlier in the research on stressful life change events, the correlates of these events are not limited to any particular types of disorder. There appears to be support for Hinkle's (1974) conclusion, ". . . that there would probably be no aspect of human growth, development, or disease which would in theory be immune to the influence of the effect of a man's relation to his social and interpersonal environment" (p. 10).

There is less agreement however, about the actual process whereby life events influence the physical and mental well-being of individuals. There are considerations concerning the circumstances surrounding the events as well as the vulnerabilities of the people experiencing them.

For example, Holmes and Rahe's (1967) work has adopted a generalist perspective. They regard both positive and negative life change events in terms of the amount of adjustment required. Life change events are given unit scores on the basis of the amount of adjustment required, e.g., death of a spouse has a life change unit of 100, while gaining a new family member has a life change unit of 39. By this method, it is the magnitude of the adjustment which is stressful and which leads to illness. Dohrenwend (1973) cites research which support this view.

Conversely, those who operate from a specifity point of view, e.g., Lazarus (1974), Mason (1971), try to identify the effect of different stressors and determine the psychological significance of the event(s).

Hinkle (1974) studied telephone company employees living under stable conditions and political refugees whose lives had been disrupted and concluded:

> [T]he effect of a social change, or a change in interpersonal relations, on the health of the individual cannot be defined solely on the nature of the change itself. The effect depends on the physical and psychological characteristics of the circumstances under which it is encountered.
> (1974, p. 41).

Also more recent evidence suggests that it is the desirability of the event, rather than the change or adjustment per se that is important (Gad & Johnson, 1980; Monroe, 1982; Sandler & Block, 1979). Viewing stress from a specificity point of view has led to research which has studied variables such as personality characteristics, methods of coping, support systems, and cognitive appraisals of the events, which lead to illness in some individuals and not in others (Andrews, Tennant, Hewson, & Vaillant, 1978; Chan, 1977; Knapp, 1979; Lazarus, 1974; Miller & Cooley, 1981; Redfield & Stone, 1979).

Considering the population of life change events, there is confusion because it is frequently difficult to differentiate events which are manifestations of the underlying pathology, rather than causes of the pathology. Even more objective events such as being fired from work could be a consequence of the pathology rather than a cause. The Holmes and Rahe scale (1967) is the most widely used with adult populations. A look at the type of events included indicates that 29 of the 43 could be considered symptoms or consequences of illness rather than causes. Secondly, including physical illnesses as stressful life changes makes it difficult to separate the change factor from the relationship between emotional disturbance and physical illness.

Other criticisms of life stress research has come from prospective studies. Grant, Yager, Sweetwood, and Ohlsen (1982) conducted a three-year prospective study in which they examined life-event and symptom information collected bi-monthly for a group of psychiatric outpatients and a comparison group of nonpatients. They found little evidence that life events were causally related to psychological symptoms. Similarly, Tausig (1982) found a correlation of only .21 between life events and depressive symptoms. Both studies used the Holmes and Rahe Schedule of Recent Life Experiences (SRE) to assess life events. The psychometric properties of the SRE have been questionned by a number of authors (Baird, 1983; Miller, 1981; Skinner & Lei; 1980).

Despite the limitations, the studies demonstrate the need to consider other variables which might influence life change events and raise a question concerning the reliability of individuals reporting life changes following some major illness or disorder.

Monroe's (1982) study illustrated the importance of obtaining longtitudinal data when doing prospective research. Monroe followed up 74 volunteers from a corporation assessing life event experiences and psychological symptoms for one year at bi-monthly intervals. Monroe found differences based on the status of the individual at the initial assessment period, i.e., individuals who were symptom free versus those who presented significant symptomology. Undesirable events rather than change per se was most relevant for predicting onset of psychological symptoms for an initially symptom-free sample. However, once a disorder had begun many diverse experiences (both desirable and neutral or ambiguous events) could exacerbate the condition.

Mueller, Edwards, and Yarvis (1978) question the directional nature of the relationship between life events and psychological disorders. Their study reports on the occurrence of life events before treatment and at a follow-up point in time, in a general sample of 187 community mental health center patients. They compared this sample with 321 nonpatients drawn from the community. Rather than using readjustment scores as is most commonly employed, they separated out the undesirable events, as well as those events which were less likely to be confounded with an individual's psychological status.

Patients reported significantly more events in the 30 days prior to treatment than nonpatients. This relationship held with demographic variables controlled. The patient group had more undesirable events (rather than desirable or ambiguous events) at admission than the nonpatient group. This difference did not hold however, for events which were relatively independent of psychological condition. Therefore, the difference seemed to be related to events which were undesirable and to the kind which could be confounded with current psychological state, e.g., divorce, change in appetite, sexual adjustment problems.

These results support the contention that the relationship between life events and patienthood is due more to differences in psychological condition than to the causal impact of life events. One major weakness of the study is that the occurrence of life change events was assessed only in the 30 days prior to admission. Events independent of psychological condition preceding this time would have been unrecorded. Thus, onset may have occurred weeks, months, or event years prior to treatment. The results also supported measuring life events in terms of undesirability in order to assess their stressfulness. In view of some of the methodological shortcomings of the study, the authors conclude that the direction of the life events-psychological disorder relationship may very well go both ways.

It is apparent from the above research, that life change events research is still at the beginning stages of clearly defining the relationship between life stress and psychological or physical disorder. There are a number of methodological problems, as well as the overall complexity of the nature of the topic under study. The following section presents studies which emphasize the need to look for other variables which might influence the effect of life change events on disorder.

Mediating Variables of Life Change Events

Research on stress and life change events is correlational and largely retrospective. Studies which have failed to find significant relationships, or have found very small relationships, have indicated the need to consider mediating or moderating variables and individual differences in response to life change events (e.g., Kimball, 1982, Redfield & Stone, 1979; Tausig, 1982). Among the variables which have been considered are support systems, coping methods, personality characteristics, self-esteem, personal control, locus of control, and cognitive appraisals. The following discussion will be reserved to those variables directly relevant to the present research, i.e., personality characteristics, personal control, locus of control and cognitive appraisals.

As Dohrenwend and Dohrenwend (1978) point out, mediating factors fall into two general categories, the subjective or intrapsychic, and the objective or environmental. Further, Dohrenwend and Dohrenwend (1978) cite experimental and observational research which indicates the significance of environmental or situational factors. For example, Seligman's (1975) studies showed how exposure to aversive conditions can lead to a state he called "learned helplessness", which results in a passive acceptance of the circumstances. What is significant about these situations is that the subject has no control over the events, eventually leading to a state of learned helplessness.

Chan (1977) focuses on the individuality of patterns of reactions to the same stressful events, and identifies some of the personality and attitudinal constructs, e.g., self-esteem, externality-internality, learned helplessness, sense of hope and efficacy, anxiety, which might help explain some of these reactional differences. He also emphasizes the interaction of personality with situational determinants. This model of interactionism is a compromise between situationism and personologism. Interactionism is described by Sells as:

> The principle that behaviour represents the interaction of the individual and the environmental situation

> implies that the total variance of any response can be accounted for only in part by individual differences in characteristics of the participating persons: It depends also on the stimulus characteristics of the environmental situation (both physical and social) and in part on the interactions between aspects of each (1963, p. 3).

Related to these personological and situational factors is the individual's subjective perception of the meaning of events. For example, Knapp (1979) provides some evidence that it is the perception of events that is more important than the events themselves. Using a group of college students he found that irrational beliefs were more related to emotional disturbance than life stress events.

Redfield and Stone (1979) had 85 undergraduate students respond to six Response Scales concerning life events. For each event, subjects rated the desirability-undesirability of the event, the gain-loss, relief-stress, reassurance-worry, stability-change, and meaningfulness-meaninglessness. Using factor analysis they assessed: Subject factors, e.g., age, gender, Event factors (personal catastrophe, achievement, domesticity) and the Response scale factors. They identified three Subject factors, three Event factors and three Response scale factors, with the interrelations showing that different types of individuals rated qualities of events in different ways.

Personality. Personality variables have also been studied in relation to life stress events in attempting to determine whether certain personality traits make a person more vulnerable to certain diseases.

Luborsky, Docherty, and Denick (1973) selectively reviewed fifty-three studies of onset conditions for psychosomatic symptoms. The psychological antecedents reported, in order of frequency, were: resentment (hostility), frustration (rejection), depression (hopelessness), anxiety, and helplessness. Although some of the studies utilized immediate observations, many were retrospective and uncontrolled.

Two studies (Canter, Cluff & Imboden, 1972; Canter, 1972) which had good control groups and documented well the presence of illness found that people who are psychologically vulnerable to illnesses are also biologically vulnerable (hypersensitive reactions to skin tests).

Minter and Kimball (1980) report studies by Voor and associates (1968, 1969) which did not find a relationship between MMPI profiles and life change events for Marine recruits. Minter and Kimball (1980) also review research which indicates that those who go for medical treatment differ from those individuals with the same illness who do not seek help. For example, students who reported to the medical facility with upper respiratory illness and asthma had angry-defiant coping styles and this habitual, excessive defiance was associated with an increased incidence of failure and disappointment. It seems that "people with maladaptive coping mechanisms will experience more life crises and failures and will respond to life crises with symptoms more overtly neurotic than the symptoms they manifest at times of lesser life stress" (Minter & Kimball, 1980, p. 198).

Garrity, Somes and Marx (1977) administered the Omnibus Personality Inventory (OPI) and an instrument similar to the Schedule of Recent Life Experiences to college students. Sixty days later they followed up the students and assessed their health status and degree of psychological impairment. Using regression analysis they found that introduction of personality factors into the life-change health model added significantly though modestly to the predicability of health change. Life change accounted for 12.9% of the total variance, and personality factors added an additional 5%. Persons characterized by social conformity were at the least risk; these persons had low levels of anxiety and had a tendency to affiliate and establish giving relationships with others. Those characterized by liberal intellectualism and by emotional sensitivity were more susceptible to impairment.

Miller and Cooley (1981) point out that there is a need to look for moderating variables as the relationship between life changes and disorders seems to plateau around .40. They looked at personality types, health locus of control, and sensation seeking in 124 psychology students. The significant correlations which were obtained for moderator variables ranged to .67. They found differences in personality and health locus of control. The introvert had more disorders due to less awareness of life changes in their external world, which limited their choices. The externally controlled in health locus of control also showed a higher correlation between life changes and disorder.

Kobasa (1979) found that executives who were under a great deal of stress but remained healthy were differentiated from those who became ill by a personality characteristic that was termed "hardiness." Hardiness involves: a deep commitment to the activities of their lives with a clear sense of values, goals and capabilities; anticipation of change as an exciting challenge; strong tendency toward active involvement with the environment and a sense of meaningfulness; the belief of control or influence over the events of their experience (internal locus of control).

Personal control. Zautra and Reich (1980) in exploring the relationship between subjective ratings of well-being and life events, added the variable of control. Using deCharm's model (1976) of "origin" (events which are under personal control) versus "pawn" (events not under personal control) events, they found that positive origin events led to reports of greater well-being and less maladjustment than pawn events which were negative or positive. Personal control seemed to be an important factor and only those positive events which were not under personal control (pawn events) were stressful.

Reich and Zautra (1981) in assessing life events, feelings of pleasantness, and feelings of psychological distress, had subjects engage in pleasurable activities between the pretest and posttest situations. They found that when people engage in self-selected activities (origin activities) which they regard as positive, they report a more pleasant attitude and a more favorable quality of life. Origin activity groups tended to perceive their world more positively than controls, but the effect of engaging in pleasant activities on psychological well-being depended on the prior life event history of the subject. Negative events functioned as life stressors in that subjects reported a lower quality of life, and showed increases in distress and depression. Subjects who had experienced negative life events however, showed less psychiatric distress after having engaged in twelve origin activities. Engaging in self-selected pleasurable activities has an overall positive effect on life attitudes, but seems to reduce psychological distress only for those who are experiencing considerable stress.

The studies presented above have shown that recent research on life change events has taken a new direction in emphasizing the multidimensional nature of life change events and therefore the need to explore other variables which help account for individual differences in response to life stress. The following section extends this view in exploring the importance of locus of control and cognitive appraisals to the study of life stress events.

Locus of Control and Cognitive Appraisals

The construct of locus of control as described by Rotter (1966) has been used extensively to predict a wide range of behaviour. The concept developed from the domain of social learning theory (Rotter, 1954; Rotter, Chance, & Phares, 1972), and instruments have been devised to assess people's generalized expectancies regarding the consequences of their behavior. Those who perceive reinforcements as being direct consequences of their actions are said to have an "internal" locus of control. Individuals who believe that reinforcements are independent of their behavior and controlled by external forces beyond their control are said to have an "external" locus of control. Considerable research, especially with adults, has been done with the locus of control concept, leading to several major reviews (Joe, 1971; Lefcourt, 1966, 1972, 1976, 1980; Rotter, 1966).

In general, an internal locus of control has been considered to be more desirable and to be related to good adjustment. The person who feels in control of situations will also feel more power to produce desired changes. This original view has been broadened considerably with the recent interest in cognitive psychology and the study of attributional processes. For example, Lefcourt (1980) views locus of control as an important personality characteristics and points out that there can be both specific and generalized expectancies of control. Reid (1977) views locus of control as a significant concept in the study of person-situation interactions (interactional psychology). Also, as elaborated by Weiner (1980), the internality-externality dimension (locus of casuality) is only one of several dimensions which must be considered when attempting to understand the casual attributions people have for life circumstances.

Locus of Control Research

Raine, Roger, and Venables (1982) point out that reviews on locus of control have not made reference to theoretical analyses or empirical investigations directly concerned with the concept's relationship to antisocial behavior in children or adults. Raine et al., (1982) make a case for the relationship between locus of control and socialization. They used a random sample of 97 noninstitutionalized 14 and 15 year-old school children. They chose a noninstitutionalized sample due to the possible effects of institutionalization; that is, the lack of freedom and the powerful control by others may lead to a more external orientation. The methodological problems in using an institutional population have been well-documented by Repucci and Clingempeel (1978).

Raine et al., (1982) used the Child Nowicki-Strickland Internal-External Scale (CNS-IE) (Nowicki-Strickland, 1973) to measure locus of control. Teachers rated the children on the Conduct Problem subscale of the Behavior Problem Checklist (Quay & Peterson, 1979). They also administered 19 standardized personality scales, six of which purport to measure socialization and delinquent personality, e.g., Criminal Propensity Scale (Eysenck & Eysenck, 1975), Personal Opinion Study (POS) (Quay & Peterson, 1971). The self-report measures were factor analyzed. This resulted in a factor called "Socialization" in which all but one of the six tests had substantial loadings. For example, the Personality Problem and Conduct Problem subscales of the POS had the highest loadings (.78 and .74 respectively). Teacher ratings of antisocial behavior corresponded to the self-report measures. Correlations of the locus of control measure (CNS-IE) with the scales of the Socialization factor were moderate. The correlation with the composite Socialization factor score was .42. The results supported the view that external locus of control typifies undersocialization.

Kumchy and Sayer (1980) used the Children's I-E Scale (Bailer, 1961) to assess locus of control in 42 delinquent adolescents referred to an Outpatient Family Court Clinic. The adolescents were also given an achievement motivation scale. They found that the delinquent adolescents were more external than children in a normal population. The delinquent group conceptualized control issues very much like younger children; as age increased the delinquents became more sensitive and responsible for acts. Delinquents with the lowest internal scores had more police contacts. The results also indicated that adolescents who have difficulty learning in school also show difficulties in learning the norms of society. If as Gilmor (1978) suggests, locus of control is an indicator of how individuals perceive their environment, there is the possibility that delinquent behavior is a function of the adolescent's perception that he has limited control over his environment, especially over negative outcomes.

A number of studies have used the CNS-IE (Nowicki & Strickland, 1973) to assess locus of control in delinquent populations. Gilmor's (1978) review of locus of control measures recommended the CNS-IE in the following manner:

> In summary, each of the locus of control scales for children and adolescents has one or more advantageous features which may attract a researcher with a particular purpose. Some caution is warranted with the use of the Battle, Bailer, and Gruen-Korte-Stephens scales due to specified problems of limited reliability and validity data, verbal ability confounding, and skewness of item response range respectively. The Tel Aviv is open to criticism on all these counts. The most attractive choice for measurement of generalized locus of control expectancies for efficiency of administration and continuity for different ages would be the Nowicki-Strickland scale and its counterpart the PPNS-IE. It should be noted that the influence of social desirability and age posed no significant problems with respect to measurement or scale validity in these initial studies. The influence of IQ was minimal on the IAR and negligible on all the other locus of control measures for school-age

> children except for the Bailer where one or two studies reported a significant correlation. (p. 8).

Studies using the CNS-IE. Duke and Fenhagen (1975) found 18 delinquent girls in a detention unit to be more external than 20 controls. One problem with the study was that there were more blacks in the delinquent group; blacks have been found to be considerably more external than whites. Also the effects of institutionalization may have led to a more external orientation.

Beck and Ollendick (1976) studied 28 male delinquent adolescents from a private school for delinquents and a control group of 28 male adolescents. The two groups were matched on age, IQ, and socioeconomic status. Deliquents were found to be more external than the normal population.

Martin (1975) found that predelinquent and delinquent noninstitutionalized middle school children were more external than children in the normal population. Similar results are reported by Obitz, Oziel, and Unmacht, (1973).

Little and Kendall (1978) examined the relationship between locus of control and academic achievement in a random sample of 45 male residents of learning centers for juvenile delinquents. Locus of control had the expected relationship to achievement; that is, externally controlled individuals were lower in academic achievement, a finding supported in previous research. They found however, that this relationship could be predicted on the basis of IQ, and locus of control scores added little to the prediction. The authors hypothesized that the finding may relate to the multidimensional nature of the Nowicki-Strickland scale which may produce different factor patterns for different groups or to the effect of incarceration on these delinquent adolescents.

Cole and Kumchy (1981) assessed delinquents aged 10 to 16 to determine characteristics of depressive symptomology. The sample consisted of delinquents referred to a Family Court Clinic for assessment prior to disposition of criminal charges. Delinquents showed reduced self-esteem, depressive symptomology, and an external orientation. Cole and Kumchy (1981) interpreted the results within a cognitive-behavioral framework. As Seligman (1978) has suggested, under stressful conditions individuals may act impulsively or cease to act at all; delinquents would fall into the category of those who act impulsively.

Friedberg (1982) reported a significant negative correlation ($r = -.62$) between external locus of control and high self-concept for 24 status offenders. Friedberg's results are supportive of previous research which points to an external locus of control and a low self-concept as two characteristics of delinquents (Martinez, Hays, & Sollway, 1977; Scarpitti, 1965; Wolk & Brandon, 1977).

In general, results with delinquent and deviant populations (both institutionalized and noninstitutionalized) have found delinquents to be more externally controlled than nondeviant populations. There appear to be differences due to race, and the lack of totally consistent findings suggests the need for further research.

Locus of control and maladjustment. Locus of control studies have also been done with other populations on variables of interest to the present research. For example, Wright and Phil (1981) studied the relationship between irrational beliefs and locus of control in male and female college students. They found that irrational beliefs correlated moderately (.42) with externality.

A number of studies (Brannigan, Rosenberg, & Loprete, 1977; Pryer & Steinke, 1973; Strickland, 1978) cite evidence which indicates that individuals who are more internally controlled show greater adaptive functioning for health-related behaviors as well as better psychological functioning. It appears that those who are more internal assume more responsibility for their health. Work by Johnson and Sarason (1978) indicates that an internal locus of control is more effective in helping individuals deal with stressful life events. The general indication is that internality is related to better psychological adjustment, but the relationship is more complex than it first appears. Internals may continue to feel responsible and experience more anxiety when in fact the situation is beyond their control. That is, there may be situations in which a degree of externality can be viewed as a positive characteristic, such as in serving as a defense against negative self-evaluation.

The relationship of locus of control to life change events has been largely unexplored. Secondly, how locus of control and life change events relate to adolescent deviance has not previously been addressed. The concept of locus of control is more complex than originally proposed; recent studies have focused on the multidimensional nature of this concept. Theories of psychological disorder, especially depression, have been built around the notion of controllability and the individual's cognitive appraisals of life situations. Most noted are Seligman's (1975, 1978) learned helplessness theory and Beck's (1967, 1970) theory of depression. This work leads into the whole area of cognitive psychology, and in particular attributional theory. The present study will be assessing the cognitive appraisals of deviant adolescents with respect to specific life events. Although cognitive appraisals have been discussed briefly as mediating effects to life stress events, it is also necessary to provide an overview of the relevance of attribution theory.

Attribution Theory

There is no one theory of attribution as the concept refers more generally to the tendency of individuals to ascribe causes to events. This tendency can be viewed as a basic need to make sense of the world. Fritz Heider (1958) is the father of attributional theory. He called it "naive psychology" because it is based on the phenomenology of the lay person--how people in everyday life figure out what causes what. Heider (1958) believed that to understand a person's behavior it was necessary to know how that person perceived and described the social world. Secondly, he believed that people desire to predict and control their environment. The importance of these causal attributions is summed up in Kelley and Michela's (1980) review of attributional theory:

> Attributional research shows that attributions affect our feelings about past events and our expectations about future ones, our attitudes toward other persons and our reactions to their behavior, and our conceptions of ourselves and our efforts to improve our fortunes. (p. 489)

Attribution theory also developed from research on locus of control and achievement motivation. Several researchers in achievement motivation (de Charms, 1976; Feather, 1969; Weiner, 1972, 1979, 1980) turned to cognitive variables to help them understand reactions to achievement situations of success and failure. As well, the research literature revealed that perceptions of people were subjective, being influenced by the immediate context, prior experience of the perceiver, and the personality of the perceiver; it was hypothesized that similar processes were involved in the perception of causality (Frieze & Bar-Tal, 1979).

Concepts such as learned helplesness (Abramson, Barber & Seligman, 1980) and depression (Beck, 1967; 1970) have been explained from an attributional perspective. Wheaton (1980) applied attributional theory to a study of psychological disorder and found some evidence that attributions which were "fatalistic" related to low socioeconomic status and psychological disorder.

It is evident that the literature in the last several years has developed new theoretical conceptualizations of the concept of locus of control and the whole area of cognitive appraisals of events and life situations. The present study attempted to extend the concept of locus of control and obtain a clearer picture of how deviant adolescents appraise their life situations, both their generalized views and the views they have of specific life events.

CHAPTER III

METHOD

The purpose of the study was to establish the relationship between the nature of adolescent deviance and life change events experienced by adolescents. It attempted to answer the question:

> What is the relationship between adolescent antisocial behavior and life change events?

This question gave rise to several more specific questions. Based on the research on juvenile delinquents, a number of categories of delinquents were identified. Quay and Parsons (1971) have provided a theoretical framework for differentiating adolescent deviants, including delinquents, according to personality characteristics and behavior of the adolescent.

Adolescent deviants can also be categorized as those who are legally defined as delinquents including those in legal custody, and adolescents who are known to social service agencies and receiving specialized support, but not in a restricted setting. As discussed earlier, adolescents may be displaying deviant behaviors, but are not necessarily involved with the legal system. Therefore, two different groups of adolescent deviants were considered and compared to a larger "normal" population of adolescents.

In addition to the categorizations for adolescent deviants, there were a number of aspects of life change events. It was important to consider the adolescent's perception or cognitive appraisals of the life change events (cf., Lazarus, 1977; Weiner, 1980) and the adolescent's perceptions of controllability (Nowicki and Strickland, 1973; Lefcourt, 1980).

Design of the Study

Subjects were obtained from three settings: a youth remand center; a center for students with family, emotional, and behavioral problems; and a school representing a so-called normal population. The deviant students were distinguished according to four major personality types of deviants: Conduct Problem, Personality Problem, Inadequacy-Immaturity and Socialized Delinquency (Quay and Peterson, 1979).

Subjects from the youth remand center and the center for behavioral problems were assessed and identified for the four categories. It was expected that individuals in the four personality categorizations would not be equally represented in the two settings, and therefore no attempt was made to relate the setting to the categorization. Subjects in each of these three settings were also assessed relative to life change events, cognitive appraisals of the events, and locus of control.

Evidence showed that gender, racial origin, and age were related to the measures used. Gender was controlled and treated as a blocked factor in the design. Due to the lack of significant numbers of subjects from various racial backgrounds the study consisted primarily of Caucasian subjects. Adolescents were defined as persons ranging in age from 11 to 18 years inclusive. Although an attempt was made to match subjects in the three settings on age and socio-economic status (SES), significant differences were found. Therefore, these variables were treated as covariates in the multivariate analysis.

Hypotheses

A number of hypotheses were predicted from the literature regarding socially deviant behavior and the effect of life change events.

1. The deviant adolescents both in the remand center and at center for behavior problem adolescents would differ from those in the general population:
    a. deviant adolescents would have a greater mean number or life change events than the nondeviant population;
    b. deviant adolescents would differ from nondeviant adolescents on the cognitive appraisal scales, although these differences might be obscured by "within deviant" differences;
    c. deviant adolescents would be more external on the locus of control scale than nondeviant adolescents.
2. The deviant adolescents would be differentiated into four personality types, and these types would differ from each other, and in particular, the conduct problem type would differ from the personality problem type:
    a. conduct problem adolescents would have a greater number of past life change events, while personality problem adolescents would have a greater number of recent life change events than other deviant adolescents;
    b. conduct problem adolescents would differ from personality problem adolescents in their cognitive appraisals of life change events; conduct problem adolescents would perceive the events as less upsetting, and feel less personally responsible for the occurrence of the event. Conversely, the personality problem adolescent would perceive the events as more upsetting, feel more personally responsible, and further, perceive themselves as less able to cope;

c. conduct problem adolescents would be more external in their locus of control than the other deviant adolescents.

3. In addition to the major hypotheses of the study tests were made on the differences between nondeviant adolescents and the personality types within the deviant adolescents on all instruments.

4. Several relationships between instrument scales were expected:
   a. positive correlation between number of life change events and locus of control, and
   b. significant correlation between locus of control and cognitive appraisals of life change events (external locus of control scorers would correspond with lower personal responsibility, lower emotional impact, and reduced perceptions of coping ability).

Sample

The populations for the study were adolescents with socially deviant behavior problems and those without. Adolescents were defined as youth ranging in age from 11 to 18 years (inclusive).

To encompass a wide range of deviant adolescents, two groups of deviants were selected. Nondeviant adolescents were selected from large suburban junior and senior high schools.

Institutionalized Deviant Adolescents

Subjects were selected from the Manitoba Youth Centre (MYC), a remand centre for adolescents between the ages of 12 and 18, who have been charged under the Juvenile Deliquents Act of Canada (Revised Statutes of Canada, 1970). MYC houses approximately 3,000 residents over a given year; approximately 4/5 are male, and over half come from locations in

Manitoba outside of the city of Winnipeg. The average daily population is 85 residents.

The youth are placed at the Centre because they are deemed dangerous to others or themselves and are awaiting their court hearings. For example, if they are not considered dangerous to others or themselves and it is their first alleged offense, they are generally pre-court released. Occasionally residents may be kept at MYC because they are in need of short-term "shelter" (a place to stay), but these youth have previously been residents of MYC. Many of the adolescents who arrive at MYC have had previous police involvement, often having participated in police diversion programs, e.g., preventive/rehabilitation classes for drunk-driving, shoplifting. The types of offenses these youth are charged with are inclusive ranging from charges of "Mischief" and "Breach of Liquor Act" to "Armed Robbery" and "Murder". Many of the youth are repeat offenders. The present sample consisted of 60 residents, 30 male and 30 female. Twenty-seven males (90%) and 19 females (63%) were second (or more) offenders and had been at MYC previously. The offenses of the youth in the sample were representative of the range indicated above. The youth ranged in age from 12 to 18 years and consisted of the following racial backgrounds: Caucasian (70%), Native (16%), Metis (10%), Asian (2%), Black (2%). Table 5 provides further details on the mean age, grade, and SES of the sample.

Participation by the residents at MYC was voluntary, and those who answered "No" to a question concerning whether they had ever been arrested were eliminated from the study (5 subjects, 1 male, 4 females, fell into this category).

Table 5

Mean Age, Grade, and SES of Three Groups of Adolescents

Group		n	M age	M Grade	M SES[a]
Institutionalized (MYC)					
	Female	30	15.23	9.63	43.76 (21)
	Male	30	15.27	9.17	43.64 (22)
	Total	60	15.25	9.39	43.70 (43)
Noninstitutionalized (McMan)					
	Female	17	14.41	8.73	42.67 (15)
	Male	25	14.48	8.59	36.72 (25)
	Total	42	14.45	8.65	38.95 (40)
Regular Classroom					
	Female	57	14.25	8.84	52.47 (53)
	Male	39	13.90	8.38	51.50 (34)
	Total	96	14.10	8.66	52.09 (87)
Totals		198	14.52	8.87	46.88 (170)

[a] Numbers in parentheses indicate number of subjects for whom SES information was available.

Noninstitutionalized Deviant Adolescents

Subjects were selected from the Edmonton McMan Youth Services Association (McMan), a social service agency designed to assist youth who are in conflict socially or emotionally, or who have been neglected or abused. More specifically, most (33 out of the 42) of the subjects in the present sample were participating in a program called "Project Break-Thru", the prime objective being to prevent removal of youth from the home and to facilitate their living and interpersonal skills. The program is regarded as an intervention/preventative program and as an alternative to youth being institutionalized. It is designed for youth between the ages of 8 to 16 years and consists of group counselling, individual counselling, family work, parent meetings, youth groups, and recreational activities. Most of the youth in the program live at home (legal status is "Family Support") but some are wards of Child Welfare of Alberta, or have been wards in past. Referrals are taken from Social Services and Community Health, as well as parents, teachers, other agencies/professionals and youth themselves. The youth must be willing to make a voluntary commitment to the program, and the family is involved in the referral process, through family sessions and in on-going contact with the youth's worker. Nine of the 42 subjects in the present sample were selected from two other McMan programs--a group home and Supported Independant Living (designed for older youth, ages 15 to 18).

The present sample consisted of 42 subjects ranging in age from 11 to 18 years. Twenty-five of the subjects were male and 17 were female, and they came from the following racial backgrounds: Caucasian (91%), Native (7%), Metis (0%), Asian (2%), Black (0%).

Reasons for referral to the programs included a full range of problems such as: family conflict, relationship problems with parents, siblings or teachers, truancy and distruptive school behaviour, negative peer group identification, poor impulse control, delinquent value system, peer rejection, low self-esteem, poor school progress, acting out behavior, attention-seeking behavior, shyness, drug or alcohol abuse, stealing, fighting with peers, adolescent adjustment problems, sexual promiscuity, extreme defiance, sexual identity problems, poor interaction skills, uncontrollable behavior, social/emotional immaturity, stress in the home (marital/parental conflict).

Over half (64%) of the 42 youth were described under the legal status of "Family Support", 8 (19%) were wards under Child Welfare, 5 (12%) were categorized under the Juvenile Delinquents Act, and 2 (5%) were on probation. In response to a test item, twenty of the 42 youth indicated they had been arrested by the police (either within the past year or more than a year ago). Table 5 provides further information on the sample characteristics.

Nondeviant Adolescents

Subjects were selected from a school division servicing an urban/suburban area in the city of Winnipeg. Students in grades 7,8, and 9 were selected from a junior high school and students in grades 10 and 11 were selected from a senior high school. The students ranged in age from 12 to 17 years, and came from the following racial backgrounds: Caucasian (97%), Native (1%), Metis (0%), Asian (2%), Black (0%). The original sample consisted of 108 students; however, 12 subjects were eliminated because they answered "Yes" to an item asking whether they had ever been arrested. Therefore, the final sample totalled 96 students (57 females, 39 males). Table 5 provides additional information on the sample.

Sample Size

For the present study it was necessary to differentiate deviant adolescents from nondeviant adolescents on the number of life change events, cognitive appraisals of life change events and locus of control. It was further necessary to differentiate deviant adolescents according to their personality type.

Since a large number of studies have been conducted using the Children's Nowicki-Strickland Internal-External scale (CNS-IE), this scale provided a basis for estimating the size of difference that could be expected between deviant and nondeviant adolescents. Locus of control is related to age: younger children are more external (e.g., Gilmor, 1978). Also, in their early teens boys are more external than girls (e.g., Nowicki and Strickland, 1973). Therefore, for the present study effect size and error variance was estimated from means and standard deviations of 13 to 15 year olds (grades 8 and 9) and separately for males and females. The locus of control scale was chosen because good estimates of these parameters are available.

The details of the procedure for determining the sample size are provided in Appendix A. A sample size of 35 was required for each of the deviant and nondeviant groups. This size is adequate for males or females or a combination, since the effect size was estimated from the smaller difference shown by females.

Since "institutionalization" may have an effect on test results of adolescents in that group, a sample was also required of adolescents experiencing difficulties in a noninstitutionalized setting. Thus, two deviant samples and one nondeviant sample were used in the study. Since the locus of control scale is only one of several scales that were used in the analyses, the samples were increased slightly. To provide adequate power for additional tests a sample size of 40 was set for each of three groups. As shown in Table 5, the actual sizes of each of the three groups exceeded 40.

Classification of Deviants

Institutionalized and noninstitutionalized deviants were assessed on several personality characteristics and classified according to the Quay and Parsons (1971) categorization scheme. Since results on the Behavior Problem Checklist were dependent in part on the observation setting of the adolescent and characteristics of the raters (Quay and Peterson, 1979), and correlations for subscales using alternative methods were low (Schuck et al., 1972), three instruments were used to categorize the deviants.

It was not expected that equal or near equal numbers of deviants would be identified for each of the four categories. Ellis (1982) obtained numbers of 137, 94, and 100 in the three categories Conduct Problem, Personality Problem, and Socialized Delinquent, respectively, with a group of 331 male adolescent delinquents using the Personal Opinion Study. Since the hypotheses made predictions for the first two categories only, it was primarily necessary to obtain adequate samples for these groups. From Ellis (1982) and Richman and Lindgren (1981) it was expected that as many as one third of a deviant population would be identified for each of the two categories.

Earlier a sample size of 40 was identified as necessary from the two settings, institutionalized and noninstitutionalized deviants. This would provide 80 deviant subjects, or approximately 26 for each of the deviant categories: Conduct Problem and Personality Problem. Since no clear estimates were available to determine sample size necessary for obtaining significant differences on the life change events, cognitive appraisal scales and locus of control measures, the sample size was left at 40 as a minimum. That is, as a minimum, 40 subjects were sought from the institutionalized deviant, noninstitutionalized deviant and normal settings. The actual sample sized included a total of 60 subjects from the institutionalized (MYC) setting, 42 subjects from the noninstitutionalized setting (McMan) and 96 subjects from the regular classroom setting (nondeviant adolescents).

Instruments

The variables were classified relative to the design as control variables, independent variables, and dependent variables.

Control Variables

Subjects were selected so as to be generally equivalent on gender, age, grade in school and socio-economic status (SES).

Analysis of variance results revealed no significant gender differences for age ($F(1,194) = 0.17$, $p = .68$), grade $F(1,187) = 3.175$, $p = .076$), and SES ($F(1,168) = 2.96$, $p = .087$).

However, there were differences for the 3 groups (Institutionalized Noninstitutionalized Regular Classroom) of adolescents on a number of the variables. Analysis of variance showed a significant difference on age, $F(2,195) = 11.99$, $p < .01$. There was also a significant difference on grade level, F(92,186) = 10.75, $p < .01$ (See Table 5 for the mean age and grade levels of each of the groups.)

Subjects were requested to indicate the occupation (work) of their father, mother, and/or guardian. In the Robinson, Athansiou, and Head (1969) review of SES scales, the Duncan scale was considered "to be superior for most survey and large sample situations" (p. 335). The scale makes use of three measures: income, education level, and subjective rating. Blishen and McRoberts (1976) have used a similar method based on the 1971 Canadian census data and the Pineo and Porter (1967) occupational prestige ratings. The Blishen and McRoberts (1976) scale provides a single SES score based on occupation, and this was the scale used in the present study. The occupation which the subject listed which had the highest SES (whether this was mother's or father's job) was used as the subject's SES, despite the fact that the Blishen and McRoberts (1976) scale was based on male occupations. For the MYC and McMan groups, SES information was also provided by the counselors/youth workers, which served as a cross-check as well as providing the information if the subject was not able to provide it. Table 5 provides the mean SES for each of the groups. As is indicated on the table, it was not possible to obtain SES information for the total sample. Analysis of variance results indicated a significant difference for the three sample groups based on SES, F(2,167) = 13.39, $p < .01$.

Independent Variables

Two independent variables were considered: deviance vs nondeviance and type of deviance (according to personality and behavior characteristics).

Deviance. The major distinction is between deviants and nondeviants, but two groups of deviants will be included. Thus three categories are defined:

1. Institutionalized deviants (MYC) -- youths in a remand center for adolescents who have been charged for offenses and are being held, while awaiting a court appearance, due to possible harm to themselves, or others;

2. Noninstitutionalized deviants (McMan) -- youths receiving specialized assistance in the community, most of whom are living at home, but who have been referred through Social Services for a variety of social, emotional, and behavioral problems; and

3. Nondeviants -- students selected from large urban junior and senior high schools.

Type of deviance. The type of deviance was defined earlier according to the scheme of Quay and Parsons (1971). Three scales were used to categorize adolescent deviants according to the four categories or types: Conduct Problem (CP), Personality Problem (PP), Inadequacy-Immaturity (II), and Socialized Deliquency (SD).

1. The Behavior Problem Checklist (BPC) consists of a 55-item scale describing deviant behaviors (Quay and Parson, 1971; Quay and Peterson, 1979). These provide scores on each of the subscales CP, PP, II, and SD, and on a "Psychotic Behavior" ("Flag") scale, although 17, 14, 8, 6, and 4 items comprise the five subscales, respectively (6 items are not scored).

The BPC is a rating scale wherein an individual such as a teacher or parent, checks a list of behaviors (items) as to whether each is descriptive of the subject. Earlier versions of the BPC required the rater to rate the subject on each item using the scheme 0, 1, 2. However, it was shown that a simple checking of "present problems" or items was as effective (Quay and Peterson, 1979, report correlations of .98 and .99 between weighted ratings and unweighted counts of checks). Scores for the individual being rated are tallies of checked items for each of the subscales.

Internal consistencies reported for the subscales reflected good homogeneity of the CP, PP, and II: .89, .83, and .68, respectively (Quay and Parson, 1971). Since the CP and PP are the subscales of primary interest the lower value for II and the fact that no values are reported for SD do not invalidate use of the BPC for this study.

Perhaps more important are the retest and interrater correlations for the four subscales. Retest reliability appears good for all four scales with two week retest correlations exceeding .74 on the four scales for males and females, separately (Evans, 1975). Lower figures are reported for retest correlations over longer time intervals, (i.e., one year, two years), however, this can be expected since personality characteristics are often transitory for children and particularly for those with emotional problems.

A more recent study (Kelley, 1981) obtained lower two week retest correlations (coefficients for each of the two raters ranged from .13 on the "Flag" items to .68 on the PP subscale). Appendix B provides further details on the results of retest reliability.

Speer (1971) notes that the factor structure of the BPC has been replicated across a wide variety of samples and from adults in varying relationships to the children rated. However, the interrater correlational data has been an issue with the BPC. While ratings between parents of a child and teacher ratings of children seen under similar situations have been quite reliable (.61 - .78), ratings of parents and teachers of the same child have been quite low (.23 - .41). The ratings seem to be a function of the characteristics of the situation and the raters. Speer used the parent ratings of both clinic and nonclinic children and their siblings. The results showed that the dimensions of conduct problem, personality problem, and inadequacy-immaturity clearly differentiated the clinic from the nonclinic groups. The socialized delinquency factor did not show this discrimination. The siblings of the clinic patients were also differentiated from the patients on the basis of parent ratings. Speer also found little difference between father and mother ratings of their children's behavior.

Other studies (Lindholm & Touliatos, 1981; Touliatos & Lindholm, 1981) also indicate reasonable agreement between parents on the ratings given to their children, but low correlations between parents and teacher ratings of the same children (see Appendix B for further details).

Kelley (1981) reports correlations based on the rating of institutionalized deliquents by dormitory counsellors: each delinquent was rated by two raters after one week and after three weeks of residence. Interrater reliability after one week ranged from .05 for the II scale to .68 for the CP scale. Similar results were obtained after three weeks, with some improvement on the PP subscale, (see Appendix B for further details). Kelly's (1981) results question the reliability of the subscales, particularly the difficulty of obtaining rater agreement.

These recent results indicate the need for some consistency in the rating procedures: raters of subjects should be in similar capacities, and should have had the opportunity to observe the subjects for two weeks at the minimum. This also indicates the importance of using several methods to obtain the categorization of the subjects. For the present study, raters were identified as those involved with the subjects in a professional capacity, i.e., teachers, counsellors, child care workers.

Several methods of validation were conducted on the BPC, but important to this study is its ability to discriminate among deviants with different behavior/personality characteristics. The subscale intercorrelations are sufficiently low to indicate that they measure distinct behavioral aspects. For example, Quay and Peterson (1979) report intercorrelations ranging from -.19 to +.72 for six studies. However, the highest correlation between CP and PP was .43. The average intercorrelation for the four subscales and six studies was .29. Thus, there is reasonable discriminant validity for the BPC subscales.

A large number of studies have reported relationships between the subscales and other constructs (see Research on the Quay and Parsons Classification System in Chapter II). From these there exists considerable evidence of the relationship between the BPC subscales and other measures of similar constructs, providing an indication of convergent validity (e.g., Proger et al., 1975; Von Isser et al., 1980).

In the present study, each subject in the Institutionalized (MYC) group was independently rated on the BPC by the 2 counsellors (cottage/dormitory counsellors) who were most acquainted with the resident. The resident resided at MYC for a minimum of 2 weeks prior to any BPC rating being completed. Similarly, each subject in the Noninstitutionalized (McMan) group was rated on the BPC by 2 youth workers who had known the youth for approximately 7 months on the basis of 3 to 5 hours per week. The subjects in the Regular Classroom were rated by a subject teacher, e.g., language arts, french, who had spent the entire year (and in some cases had known the students for several years) with the class. Only 1 BPC rating was obtained for each of the subjects in the Regular Classroom group. Secondly, due to their controversial nature, 2 items were deleted from the BPC for the Regular Classroom group. One item, #35 ("Masturbation") is an item on the II scale, and the other, #54 ("Enuresis, bedwetting") is an item which is not scored.

The correlations for the 2 raters of the MYC and McMan groups are as follows: CP = .62, PP = .32, II = .50, SD = .60, "Flag" = .35. In comparing these correlations with those presented in Appendix B, they are higher than the "mothers-teachers" or "fathers-teachers" correlations but generally lower than the "mothers-fathers" correlations.

Table 6 provides the means and standard deviations for the 3 groups of adolescents and each of the BPC scales.

Intercorrelations of the BPC subscales with each other, and with the subscales of the Personal Opinion Study (POS) and the Case History Scale (CHS) are provided in Table 9. The BPC subscale intercorrelations range from -.28 to .48. Quay and Peterson's (1979) review of results stated, "obtained intercorrelations are highly variable between samples and seem not to be particularly related to the nature (deviant vs. normal) of the sample" (p. 3). As referred to in a previous section,

Table 6

Means and Standard Deviations for Three Groups of Adolescents on the Behavior Problem Checklist (BPC)

Group		BPC Subscales							
		CP		PP		II		SD	
	n	M	SD	M	SD	M	SD	M	SD
Institutionalized (MYC)									
Female	30	2.78	2.27	1.47	1.29	0.62	0.74	2.03	1.53
Male	30	4.45	3.31	2.07	1.98	1.10	0.93	2.38	1.97
Total	60	3.62	2.94	1.77	1.68	0.86	0.87	2.21	1.76
Noninstitutionalized (McMan)									
Female	17	3.18	2.66	3.38	2.02	1.29	1.57	0.88	1.10
Male	25	4.68	4.60	2.08	1.69	1.24	0.91	1.52	1.57
Total	42	4.07	3.97	2.61	1.92	1.26	1.21	1.26	1.42
Regular Classroom									
Female	57	0.51	1.76	0.88	1.31	0.16	0.53	0.11	0.45
Male	39	2.56	3.81	1.08	1.91	1.13	1.45	0.59	1.25
Total	96	1.34	2.94	0.96	1.58	0.55	1.11	0.30	0.90

Note. The means and standard deviations of the subscales for the MYC and McMan groups are the averages for the 2 raters.

Quay and Peterson (1979) reported that the CP, PP, and SD scales were quite independent while the II scale related to CP and PP in varying degrees (4% - 52% of the variance). The present results show the CP and PP scales to be very independent of each other. The SD subscale has a .33 correlation with CP (accounts for 11% of the variance) and II correlates .48 with CP and .31 with PP. Overall, particularly those subscales of major interest to this study, i.e., CP and PP, appear to be fairly independent.

2. The Personal Opinion Study (POS) is a 100-item self-report questionnaire to which the subject responds "true" or "false" (Quay and Parsons, 1971). The items are statements that reflect attitudes, beliefs, feelings, and behavior. They are divided into three subscales CP, PP, and SD (II is not represented in the POS) with 45, 30, and 25 items respectively. Some of the items reflect positive attitudes and are scored or counted if the subject responds false. Scores are tallies of the items appropriate to the subscale answered in the direction identified (summary statistics are provided in Table 7).

Internal consistencies for the POS subscales are similar to those for the BPC: .92, .87, and .62 for the CP, PP, and SD respectively (Quay and Parson, 1971). Genshaft (1980) obtained similar internal consistencies for the three scales: .92, .82, and .53.

The retest stability is a more useful indicator of reliability. This was reported by Quay and Parsons (1971) over a 90-day interval as .75 for CP, .76 for PP, and .61 for SD. These appear reasonable especially for the CP, and PP.

A number of studies have related the POS subscales to each other and

Table 7

Means and Standard Deviations for Three Groups of Adolescents on the Personal Opinion Study (POS)

Group		POS Subscales							
		CP		PP		II		SD	
	n	M	SD	M	SD	M	SD	M	SD
Institutionalized (MYC)									
Female	30	14.07	8.89	19.10	5.65	--	--	14.90	3.14
Male	30	13.63	9.36	15.87	5.79	--	--	15.93	3.25
Total	60	13.85	9.05	17.48	5.90	--	--	15.42	3.21
Noninstitutionalized (McMan)									
Female	17	9.59	5.29	16.76	5.27	--	--	13.41	3.45
Male	25	16.60	9.98	16.48	6.83	--	--	14.76	3.82
Total	42	13.76	9.02	16.60	6.18	--	--	14.21	3.69
Regular Classroom									
Female	57	5.56	4.59	11.25	6.69	--	--	7.77	3.16
Male	39	7.36	5.84	12.10	5.04	--	--	11.59	4.08
Total	96	6.29	5.19	11.59	6.06	--	--	9.32	4.01

to other variables. Quay and Parsons (1971) report CP and PP intercorrelations for adolescent delinquents from .17 to .43 and for nondelinquents from .46 to .59. Correlations of CP and PP with SD range from -.20 to .10 for adolescent delinquents and .46 to .52 for nondelinquents. It appears the correlations are higher for nondelinquents than for delinquents. The variances, however, do not differ greatly between groups. Since distinctions were made with the deviant groups only, the low intercorrelations for delinquents suggested that separation was possible.

As with the BPC, the POS subscales are shown to be related to a variety of constructs although the convergent validity is not as clear (see Chapter II). Like the BPC there is stronger evidence for the contruct validity of the CP and PP scales than for the SD scale.

Schuck et al. (1972) states that "when Ss are assured of anonymity, they are relatively truthful on the Neurotic factor [PP], falsify in the favorable direction on the Psychopathic factor [CP], and do not know how to simulate the Socialized factor [SD]" (p. 220). They further report correlations between subscales ranging from .08 to .39. These are of the same order as the correlations between similarly named subscales from the BPC and POS: these range from .07 to .12 in the Quay and Parsons (1971) report and -.16 to .24 in Schuck et al. (1972).

The present results (see Table 9) show fairly high intercorrelations for the three POS subscales, making the independence of these subscales questionable. Correlations between similarly named scales on the BPC and CHS with the POS, show good intercorrelations on the CP subscale for all three measures (correlations range from .44 to .73), while the multimethod validity for the remaining subscales is questionable.

3. The Case History Scale (CHS) is a 36-item scale completed by the caseworker or other professional staff based on life history data of the subject (Quay and Parsons, 1971). The items are behaviors or characteristics indicative of deviance, and are divided into the four subscales CP, PP, II, and SD (11, 10, 5, and 8 items respectively). Scores are tallies of items appropriate to the subscale. The accuracy of the scale is based on the detail of the history data available for the subject. This presents some problem as the data may be available in varying degrees for deviant groups. Quay and Parsons (1971) report reasonable internal consistencies for three of the four subscales, including the two most necessary to this study (.77, .72, .23, and .73 for CP, PP, II and SD respectively). No other studies provide any indication of the CHS reliability, nor the accuracy of rating subject history using the scale. Two studies (Jurkovic and Prentice, 1977; Schuck et al., 1972) have used the CHS with the BPS and POS. For the Schuck et al. study (1972) the CHS was based on delinquent subjects for whom there were behavioral records over approximately 10 months residence. The Jurkovic and Prentice study (1979) analyzed the life history of delinquents using the CHS, but these subjects were in a special school. Neither study reported any difficulty in obtaining the CHS scores. The present study used the CHS for the two groups of deviant adolescents, one of which was not institutionalized (McMan). The counsellors at MYC and the youth workers at McMan completed the CHS, based on as much information as was available from records/files and the admission/referral process. The CHS was not completed for the subjects

in the nondeviant sample (Regular Classroom). Summary statistics are provided in Table 8.

The interrelationships between the three methods of measuring deviance, BPC, POS, and CHS, indicate low multimethod validity for the four subscales. These are much lower than could be expected from the reliability estimates. Schuck et al. (1972) reports correlations between BPC and CHS measures of CP and PP of .32 and .28, which are higher than those reported by Quay and Parsons (1971), for the same measures and scales. The present results (see Table 9) report correlations higher than those of Schuck et al. (1972) between the BPC and CHS measures on CP and PP (.73 and .44 respectively). In fact, the CP scale is highly correlated across all three methods (BPC, CHS, and POS). The PP scale of the CHS however, is negatively correlated with the PP scale of the POS which was not expected given previous results (Quay & Parsons, 1971; Schuck et al., 1972). The SD scale of the BPC is highly correlated (.72) with the same scale of the CHS (refer to Table 9 for further information) While it is evident that the interrelationships between the three methods. (BPC, CHS, POS) are lower than would be desired, there are fairly good "across method" correlations for the two scales (CP and PP) of prime interest to this study.

To obtain a broad base for distinguishing deviants according to personality/behavior a composite ~~using~~ the three methods was employed. The method of obtaining composite scores was that described by Quay and Parsons (1971) — this was used by Jurkovic and Prentice (1977) as well:

1. Raw scores were obtained for the four subscales (three for the POS) and three methods.

Table 8

Means and Standard Deviations for Three Groups of Adolescents on the Case History Scale (CHS)

Group		CHS Subscales							
		CP		PP		II		SD	
	n	M	SD	M	SD	M	SD	M	SD
Institutionalized (MYC)									
Female	30	1.10	1.58	0.73	1.05	0.53	0.94	1.77	2.08
Male	30	2.30	2.35	1.03	1.85	0.47	0.90	1.63	1.96
Total	60	1.70	2.08	0.88	1.50	0.50	0.91	1.70	2.00
Noninstitutionalized (McMan)									
Female	17	1.76	2.14	2.00	1.84	0.29	0.47	0.88	2.06
Male	25	3.24	3.78	1.96	1.99	0.72	0.94	1.32	2.23
Total	42	2.64	3.27	1.98	1.91	0.55	0.80	1.14	2.15
Regular Classroom									
Female	57	--	--	--	--	--	--	--	--
Male	39	--	--	--	--	--	--	--	--
Total	96	--	--	--	--	--	--	--	--

Table 9

Intercorrelations for the Independent Measures Subscales for Two Groups of Deviant Adolescents (MYC and McMan)

Measures

	BPC[a]				POS[b]				CHS			
BPC	CP	PP	II	SD	CP	PP	—	SD	CP	PP	II	SD
CP	1.00	.01	.48**	.32**	.37**	.11	—	.14	.73**	−.35**	.20*	.40**
PP	—	1.00	.31**	−.28**	−.02	.03	—	−.11	.02	.44**	.15	−.30**
II	—	—	1.00	.16	.12	.01	—	.11	.21*	−.04	.13	.13
SD	—	—	—	1.00	.24**	−.02	—	.19*	.31**	−.33**	.20*	.72**
POS												
CP	—	—	—	—	1.00	.48**	—	.49**	.44**	−.24**	.10	.21*
PP	—	—	—	—	—	1.00	—	.63**	.17*	−.21*	−.02	.06
—	—	—	—	—	—	—	—	—	—	—	—	—
SD	—	—	—	—	—	—	—	1.00	.06	−.21*	.10	.15
CHS												
CP	—	—	—	—	—	—	—	—	1.00	−.25**	.31**	.44**
PP	—	—	—	—	—	—	—	—	—	1.00	.00	−.38**
II	—	—	—	—	—	—	—	—	—	—	1.00	.28**
SD	—	—	—	—	—	—	—	—	—	—	—	1.00

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[a] The correlations for the BPC subscales have taken into account the average of the two raters for two of the sample groups. [b] The POS does not have an II subscale.

*$p < .05$, two-tailed. ** $p < .01$, two tailed.

2. T-scores were determined for the BPC, CHS, and POS using the norms presented for 1075 institutionalized delinquents, ages 14.4 to 18.8 years, reported by Quay and Parsons (1971). This resulted in a total of 10 T-scores including 3 for the BPC (CP, PP, and II), 4 for the CHS (CP, PP, II, and SD), and 3 for the POS (CP, PP, and SD). The SD scale of the BPC was not used as this scale was added to the BPC in 1979 (Quay & Peterson, 1979), and therefore results from the 1971 manual (Quay & Parsons, 1971) did not include the SD scale. Due to the high correlations (.98 - .99) between the first BPC scale (Quay & Parsons, 1971) and the revised scale (Quay & Peterson, 1979), the 1971 norms were used.

3. A composite of T-scores was obtained for each of the four subscales by summing the T-scores for the appropriate subscale across the methods of measuring (BPC, POS, CHS).

4. The composite of T-scores was transformed according to the norms for composites given in Quay and Parsons (1971). Thus, a composite T-score with mean of 50 and standard deviation of 10 was obtained for each of the four subscales.

5. Each subject was then compared on the four subscale composite T-scores to identify which type was most characteristic of the subject. This was accomplished by comparing the highest score with the second highest, and, if it exceeded a specified minimum difference, the subject was allocated to the category defined by the subscale with the highest score. Different methods have been used to arrive at the minimum difference. For example, studies using the POS (Ellis, 1982; Genshaft, 1980), have simply used the highest standard score for classifying the

personality categories. Quay and Parsons (1971) provide a procedure using the standard error of differences. More recently, Jurkovic and Prentice (1977), selected categories on the basis of a composite score above 50 which exceeded the scores on the other scales by one-half a standard deviation (5 points). The same procedure was employed for the present study.

Of the 102 subjects who fell into the general category of "Deviance" (MYC subjects plus McMan subjects), 40 (39%) could not be designated into a particular personality/behavioral category by the method employed. This is a much higher attrition rate than reported by Ellis (1982), and is likely due to the more stringent method of classification. Table 10 presents the results for the 62 subjects who were classified. There are higher numbers in the CP (_n_ = 26), and PP (_n_ = 28) categories and lower numbers in the II (_n_ = 1), and SD (_n_ = 7) categories than was indicated from previous results (Ellis, 1982; Jurkovic & Prentice, 1977; Genshaft, 1980). Unlike the studies cited above, the present one includes both males and females (rather than males only). Since the II and SD categories were represented by such few subjects and were only of minor interest to the study, only the CP and PP categories were used in subsequent analyses.

Dependent Variables

Three major variables were specified in the hypotheses as related to the deviance variables. These were treated as dependent variables for purposes of the design and analysis, and were delineated as recent and past number of life change events (MALCES scale), three cognitive appraisal scales (cognitive appraisals of life change events), and locus

Table 10

Numbers of Deviant Adolescents Clearly Classified in the Four Personality Categories[a]

Deviant Adolescents	Personality Catergories[b]			
	CP	PP	II	SD
Female	6	15	1	2
Male	20	13	0	5
Totals	26	28	1	7

[a] The original sample consisted of 102 subjects, and of these 62 were clearly classified into the four personality categories. [b] Based on composite T-scores as obtained from the BPC, CHS, and POS.

of control.

Life change event scales. A number of instruments of life change events have been developed for adults. The most widely used are the Schedule of Recent Life Experiences (Holmes and Rahe, 1967) and the Social Readjustment Rating Scale (Masuda and Holmes, 1967). Coddington (1972a) modified the Social Readjustment Rating Scale for use with children and adolescents, but used adults to determine the significance of these change events when they happen to children and adolescents. Two recent scales (Yeaworth, York, Hussey, Ingle and Goodwin, 1980; Newcomb, Huba and Bentler, 1981) have been developed with items relevant to the developmental problems of adolescents and rated by adolescents themselves. Both of these instruments are in the initial stages of development and use.

Previous research has shown that it is mostly undesirable events that relate to disturbance (Gad and Johnson, 1980; Monroe, 1982; Sandler and Block, 1979). The present research predominantly used items from the Yeaworth et al., (1980) instrument, the Adolescent Life Change Event Scale (ALCES), as most of the items were considered "undesirable" events. Items which seemed relevant to the problems deviant adolescents might face and which were not included in the ALCES were added from the Newcomb et al. (1981) instrument and by the present author. Also, some of the methods used in obtaining the data were adopted from the Newcomb et al., (1981) study. Both instruments are discussed briefly, followed by a description of how the Modified ALCES (MALCES) was used in the present study.

Adolescent Life Change Event Scale (ALCES). Three studies have been conducted using the ALCES, and each time there has been some modification of the items used. Life change events refer to a variety of personal, social, family and occupational life changes which require adjustment by the adolescent and that may be stressful. Yeaworth et al. (1981) initially sampled 207 voluntary white middle-class junior high and high school students. The instrument contained 31 items with two items left blank for subjects to write in other events. For each item, the students were asked to indicate how "upsetting" the event would be, on a one to five rating scale, ranging from "not at all upset" to "extremely upset". Secondly, the students were asked if the event had occurred in the past year. Mean ratings were obtained for each of the items and multiplied by 20 to obtain Life Change Unit (LCU) scores comparable to those developed by Holmes and Rahe (1967) for adults. For example, a parent dying had a LCU of 98, while moving to a new home had a LCU of 51; the mean was 475. The mean number of events for males was 7.8 and for females 8.7.

Most students responded to the opportunity to add other items to the list. The items were similar to those in the scale but were often more personalized, e.g., "being torn between divorced parents." The initial scale did not include items dealing with sex and violence, as one of the purposes of the instrument was to study life stress events in adolescents who were identified as "acting out." The students often supplied such events.

A second study, Mendez, Yeaworth, York and Goodwin (1980), used a modified version of the ALCES, which included 38 items. The instrument was administered to junior high and high school students from two private schools of upper-class status. Their mean LCU score was 497.5, and the mean number of events was 9.08. This is higher than scores reported earlier for the middle-class subjects, but the upper-class group had seven more items. When only the 27 common items were used, the LCU score for the upper-class group was 394.63 and for the middle-class group was 433.11.

In spite of changes made to the questionnaire, agreement of weightings was very similar for the two studies. There were differences for social class on some of the items, e.g., upper-class subjects were found to hassle more with parents, experience more drugs/alcohol, wore more braces/glasses, and had more trouble with teacher/principal. Middle-class subjects experienced more drugs/alcohol among family members, more illness, more pregnancy among friends, failed more grades in school, and hassled more with siblings. Upper-class subjects found "quitting school" and "parent losing a job" as more stressful than middle-class subjects. Middle-class subjects found "getting into drugs" and "hassling with parents" as more stressful than upper-class subjects.

Experience influenced ratings; those who experienced "getting into drugs or alcohol," "getting arrested by police," "failing a subject in school," rated those events as less stressful than those who had not experienced the event. Females perceived more events to be more stressful than males. Experience with an event, gender, and grade level of subjects had a significant influence on the perception of events, and there was a trend for number of events to increase with age.

A third study (R.C. Yeaworth, Personal Communication, September 24, 1982) expanded the ALCES to 59 items, and used a more racially and socioeconomically balanced group of 223 subjects: 80 males, 143 females;

155 whites, 60 non-white; 78 aged 12-13, 105 aged 14-15, 40 aged 16-19; and 184 grades 7-9, 39 grades 10-12. The LCU ratings were similar to those reported for the first two studies.

The latest instrument has been used successfully with adolescents with a variety of backgrounds, and, although good psychometric data is not available, it appears to provide a good indication of life stress.

Life Event Questionnaire (LEQ). Newcomb, Huba and Bentler (1981) developed a 39-item life change questionnaire and administered it to 1,018 male and female adolescents in grades 10 to 12. Grade and racial status were obtained, but not socio-economic status. They also administered measures of health and psychological functioning.

Newcomb et al., (1981) used idiosyncratic weightings rather than normative weightings, as does the LCU. Skinner and Lei (1980) and Zimmerman (1983) report correlations of .97 and .94 respectively between normative and idiosyncratic weighting systems. As reported earlier in the literature, an argument for idiosyncratic weightings is that an event may have a different impact on one person than another, e.g., Redfield and Stone, (1978); Sarason, Johnson, and Siegel (1978).

Subjects were asked to do three tasks for each item. They rated each item's desirability by stating degree of "happiness" on a 5-point rating scale. Next they indicated whether each event had happened in the past year, and thirdly whether the event had been experienced more than a year ago. The average number of events occurring during the past year for the adolescents was 8.95.

The 39 items were subjected to factor analysis. Seven factors accounted for 44% of the variation among the 39 items; these were identified as Family/Parents, Accident/Illness, Sexuality, Autonomy, Deviance, Relocation and Distress. The internal consistencies for the scales ranged from .36 to .58, indicating that many of the events were quite independent. A principal component analysis resulted in three factors; one factor was loaded by Family/Parents, Sexuality, Deviance and Relocation, a second by Accident/Illness and Distress, and a third factor was specific to Autonomy.

Analysis of the rating of events in terms of the desirability dimension revealed that only on two scales, Sexuality and Autonomy, was there a greater than 10% endorsement of the neutral and positive categories of the scales (neutral, happy, and very happy).

There were 14 events on which percentages of occurrences for males and females differed significantly. For example, the males more often got into trouble with the law, and started making money on their own, while the females more often experienced parental divorce, and more often gained weight. The males reported more difficulty with Deviance events, and the females more difficulty with Accident/Illness and Distress events. However, there was no difference between male and females on the total score of event occurrence, nor on the total desirability scores.

Grade differences showed that younger students had more difficulty with negative events and Deviance in particular. Autonomy experiences increased with age. Reports by Coddington (1972b) show an increase of change events from childhood to adolescence. The general indication is that middle adolescence may be the peak life period for experiencing changes. Newcomb it al. (1981) also found ethnic differences but it has been demonstrated (Gad and Johnson, 1980) that, once SES is controlled, there remain no ethnic differences.

For most events, a previous occurrence increased the chances of a subsequent occurrence. Further analysis revealed that this was true only for corresponding types of events.

Newcomb et al. (1981) also found negative relationships between specific stress events and health and psychological functioning. For example, one dimension of general disruption was related to a dimension of psychological disturbance. Most factors gained in discriminant utility when differentiated by reported desirability, indicating the importance of including this dimension.

Modified Adolescent Life Change Event Scale (MALCES). The present study used a modified version of Yeaworth et al.'s (1980) ALCES scale. Part I of the scale consisted of 50 items: 42 items adapted from the Yeaworth (ALCES) scales; 5 items (#41, #44, #46, #47, #48) from the Newcomb (LEQ) scale; and 3 items (#39, #45, #49) included by the present author (see Appendix C for a copy of the instrument).

Similar to Newcomb et al., (1981) these items were assessed according to their occurrence in the past year, and their occurrence prior to one year. Rather than using LCU weighting the present study tallied the number of events which have occurred as it has been shown that LCU ratings have no advantage over simply counting the number of events experienced (Hotaling et al., 1978; Miller and Cooley, 1981; Sandler and Brock, 1979; Zimmerman, 1983). Although Newcomb et al., (1981) found no difference between idiosyncratic and unit weightings, given the samples used for this study, it is expected that there will be differences between deviants and nondeviants in their evaluation of life change events.

It is evident that little reliability or validity data was available on the ALCES. The content validity is partially demonstrated in the similarity between items listed by adolescents as meaningful, and those presented in the scale. Secondly, a number of the items listed by adolescents have been incorporated into the scale, e.g., wrecking the car, pregnant/getting someone pregnant. Since the scale was used to compare groups, norming data was not considered necessary, although it is difficult to determine (without variance and reliability estimates) the ability of the instrument to demonstrate differences.

Subjects in the MYC and McMan groups (deviant groups) were assessed on all 50 items of the MALCES, plus provided with an opportunity to write in additional items. Due to their controversial nature, 5 items were deleted from the scale for the Regular classroom sample. The deleted items included: "mother getting pregnant," "problem with menstrual periods (girls only)," "sister getting pregnant," "brother getting someone pregnant," "getting pregnant/getting someone pregnant." The Regular Classroom sample was also provided with the opportunity to write in additional items. Table 11 provides the means and standard deviations for each of the three sample groups on life change events within the past year and more than a year ago. The three groups are compared only on the items which they had in common (the 45 items); in addition, the "Being arrested by police" item was deleted for comparison purposes, as this item was used as one of the criteria in distinguishing (separating) the groups. Therefore, comparisons for the three groups are provided based on a total of 44 items. Also provided in Table 11 are the means and standard deviations for the 2 deviant groups based on the 49 items which

Table 11

Means and Standard Deviations for Life Change Events on the MALCES for Three Groups of Adolescents

Group		MALCES (44)[a]				MALCES (49)[b]			
		Within past year		More than a year ago		Within past year		More than a year ago	
	n	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Institutionalized (MYC)									
Female	30	19.50	5.48	19.77	7.08	21.10	5.74	21.07	7.81
Male	30	16.47	5.35	19.07	8.49	17.97	5.56	20.67	9.02
Total	60	17.98	5.59	19.42	7.76	19.53	5.82	20.87	8.37
Noninstitutionalized (McMan)									
Female	17	14.53	5.39	18.18	4.56	14.71	5.47	18.94	4.67
Male	25	17.44	6.33	20.00	7.58	18.08	6.60	21.08	7.97
Total	42	16.26	6.07	19.26	6.53	16.71	6.63	20.21	6.84
Regular Classroom									
Female	57	9.61	4.31	11.32	4.85	--	--	--	--
Male	39	9.31	3.02	12.18	5.44	--	--	--	--
Total	96	9.49	3.82	11.67	5.09	--	--	--	--
Grand Total	198	13.50	6.30	15.63	7.36	--	--	--	--

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[a] Based on the 45 items minus the "Being arrested by police" item which the three groups had in common. [b] Based on the 50 items minus the "problems with menstrual period (for girls)" item which two groups had in common.

they had in common (item #28 applied to girls only and was deleted). The results in Table 11 show that the Regular Classroom group had a similar mean number of life events (9.49) during the past year as reported for similar scales and sample groups, i.e., Newcomb et al. (1981).

Cognitive appraisals of life change events on the MALCES. Subjects were requested to appraise each event on Part I of the instrument according to three Likert-type response scales. The first (Upsetness scale) indicates the degree to which the event is upsetting on a 5-point rating scale from "not at all upset" to "extremely upset."

The second scale (Responsibility scale) determines the degree to which the adolescent feels personally responsible for the event, that is, how much the adolescent feels he/she is the cause of the event. This dimension was indicated on a 5-point scale from "not at all responsible" to "totally responsible." Items #2, #8, #13, #18, #28, #42, and #49 were deleted from this scale as they were not situations for which one could be held responsible.

The third scale (Coping scale) indicates how well the adolescent feels he/she deals with (copes with or manages) the event in comparison to others of similar age. The 5-point scale is from "much better than others" to "much worse than others."

The rationale for the appraisal scales was that each one specifies a different aspect of the appraisal of the event by the adolescent. The first assesses the degree of personal emotional impact that the events have; the second assesses whether the adolescent feels that he/she is causally related to the occurrence of the events; the third assesses the degree of personal adequacy the adolescent feels in coping with life events. The first dimension has been used by Yeaworth et al. (1980), and the other two were developed for the purposes of this study. This parallels the work of Redfield and Stone (1979) who used a similar methodology but assessed different dimensions, e.g., meaningfulness, amount of change. The three scales form "Part II" of the Modified ALCES instrument (refer to Appendix C for a copy of the scales).

The MALCES (Part I and Part II) was completed by all subjects with one exception. Due to time constraints in the school setting, the Regular Class group did not complete the Responsibility scale of the Cognitive Appraisals (Part II MALCES). The Responsibility scale was the one eliminated because the other two scales appeared to be more related to the overall purpose(s) of the study. Table 12 provides the means and standard deviations for the 3 groups of subjects on the Cognitive Appraisal scales. The means are the scale points (range of 1-5) summed over all the items.

Locus of control. The relationship between individuals' generalized expectancies of the consequences of their behaviors and cognitive appraisals of specific events was discussed earlier (see Chapter II). The Children's Nowicki-Strickland Internal External scale (CNS-IE), as described in Nowicki and Strickland (1973), was identified as the most appropriate generalized expectancy scale to be used with adolescents (see Gilmor, 1978; Robinson and Shaver, 1973; see also Chapter II). The CNS-IE measures an individual's locus of control and identifies him along the dimension of internal vs external control.

The scale consists of 40 self report items, expressed as questions, regarding beliefs about the causes of events, including events happening

Table 12

Means and Standard Deviations for the Cognitive Appraisal Scales (Part II) of the MALCES for Three Groups of Adolescents

		Cognitive Appraisal Scales					
Group		Upsetness[a]		Responsibility[b]		Coping[c]	
	n	M	SD	M	SD	M	SD
Institutionalized (MYC)							
Female	30	135.34	26.32	127.30	26.06	134.62	26.49
Male	30	119.30	26.10	122.37	29.42	126.19	26.72
Total	60	127.32	27.22	124.84	27.67	130.41	26.72
Noninstitutionalized (McMan)							
Female	17	143.58	27.28	132.80	37.50	134.62	30.58
Male	25	126.04	26.32	125.23	19.88	133.11	24.55
Total	42	133.50	27.81	128.37	28.35	133.75	26.91
Regular Classroom							
Female	57	161.99	21.29	—	—	154.05	20.18
Male	39	152.88	29.84	—	—	155.14	24.56
Total	96	158.25	25.41	—	—	154.51	22.00

[a] Based on the 44 ALCES items the three groups had in common. [b] Based on the 43 ALCES items on which the two groups were assessed. [c] Based on the 44 ALCES items the three groups had in common.

to oneself and to others. The subject responds to the questions by selecting yes or no. Scores are obtained by counting the total number items answered in an externally controlled direction. Although some evidence exists for the multidimensionality of the CNS-IE (e.g., Kendall, Finch, Little, Chirico & Ollendick, 1978), scores were obtained for one dimension only. This procedure was chosen since the CNS-IE was selected to provide a measure of generalized locus of control--the cognitive appraisals provide more specific indicators. Also, there is evidence of the internal consistency of scale used as a single dimension; item-total correlations are positive for all items and corrected split-half reliability exceeds .70 for junior high students (Nowicki and Strickland, 1973).

Evidence exists for the construct validity of the CNS-IE both relative to measures of other similar personality constructs and to variables such as achievement (Gilmor, 1978). Gilmor (1978) also argues for the "predictive and criterion-related validity of the measures of generalized locus of control expectancies" (p. 20); this includes the CNS-IE.

Since the CNS-IE was used as a comparative measure for the various deviance groups, scores were not standardized or norm-derived. Raw scores were used. Table 13 provides the means and standard deviations for the 3 groups on the CNS-IE. Comparing the means and standard deviations given in Table 13 with those provided in Appendix A from previous studies, the means for the nondeviant groups are similar, while the standard deviations for the nondeviant group (Regular Classroom) in the present study are larger. As for the deviant groups, the females in the present study tend to have higher means than those presented in

Table 13

Means and Standard Deviations for Three Groups of Adolescents on the Nowicki-Strickland Internal External Scale (CNS-IE)

Group		CNS-IE		
Institutionalized (MYC)		n	M	SD
	Female	30	18.40	5.57
	Male	30	14.93	4.62
	Total	60	16.67	5.37
Noninstitutionalized (McMan)				
	Female	17	17.18	6.94
	Male	25	16.52	6.21
	Total	42	16.79	6.40
Regular Classroom				
	Female	57	13.05	5.42
	Male	39	13.13	5.20
	Total	96	13.08	5.31
	Grand Total	198	14.95	5.83

Appendix A, while the male scores are slightly lower. Also, the standard deviations for the deviant groups in the present study tend to be larger than those provided in Appendix A. Generally, the results from the present research do not differ greatly from those reported in Appendix A, suggesting that the CNS-IE can be used effectively for the samples in this study.

Procedure

Three groups were assessed: Institutionalized deviants (MYC), Noninstitutionalized deviants (McMan), and Nondeviants (Regular Classroom). The tests were administered in two sections. Section I consisted of the Personal Opinion Study (POS) and Children's Nowicki-Strickland Internal External scale (CNS-IE). The second section consisted of the Modified Adolescent Life Change Event Scale (MALCES), which includes the 3 Cognitive Appraisal Scales. Each section took approximately 35 minutes to complete and subjects were given a 10-15 minute break between sections. Subjects were given a code number so that it was not necessary for them to provide their names, and they were asked to state their age, gender, grade, and the occupations of their parents or guardians on a cover sheet to the instruments. Instructions and sample questions were read aloud for each scale in the testing battery. Subjects were requested to ask any further questions they might have as they completed the instruments, and the researcher was available to the subjects for any questions or concerns following completion of the test battery. Participation of all subjects was voluntary; for the entire study only 3 refused.

Testing of the MYC group took place at the institution in the cottages where the residents reside and attend school. The school classroom was used for the testing. Most of the subjects were tested in small groups (5-6) by the researcher. This provided the opportunity for individual attention if subjects had difficulty with any of the test items and also provided for close monitoring of the procedure. Some subjects at MYC completed the tests individually under the supervision of a cottage counsellor. The counsellors (as a group) had been given an hour and a half training session which included administration procedures as well as information on completing the Behavior Problem Checklists (BPC) and the Case History Scale (CHS). The two counsellors who were most acquainted with the resident independently completed a BPC. It was also required that the subject had resided at MYC for a minimum of 2 weeks. The CHS was completed by one of the two counsellors who had completed the BPC. Counsellors also provided background information which included: delinquency information, school information, assessment information, and occupations of parents or guardians (refer to Appendix D for a copy of the form). Testing at MYC took place over a fairly long period of time (September 1983 - March 1984) due to factors such as: the low ratio of female to male residents, selection of primarily Caucasian residents, a length of stay less than two weeks, and repeat offenders.

Testing of the McMan group took place at the centres where the youth usually met for group sessions with their respective youth workers. The subjects were tested in groups which varied in size from 5 to 10 subjects, by the researcher. As with the MYC counsellors, the group of youth workers at McMan were given an hour-long training session which provided information on completing the BPC and CHS. Two BPC ratings and 1 CHS rating were completed for each subject. The youth workers were asked to provide background information on each subject which included: reason for referral, legal status, delinquency information, school information, assessment information, occupations of parents or guardians (refer to Appendix D for a copy of the form). Testing took place during February and March of 1983.

Subjects in the Regular Classroom group were tested by the researcher during their regular classroom periods in June, 1983. Classroom sizes varied from 15 to 25 students. The teachers were individually provided with information on completing the BPC. Only 1 BPC was completed and the CHS was not completed. As mentioned previously, some controversial items were removed from the Modified ALCES and the BPC for this group. Also, due to time constraints, this group did not complete the Responsibility Scale in the Cognitive Appraisals section of the MALCES.

Analysis

Hypothesis 1 specified differences between deviants and nondeviants on a number of variables. Although gender and the interaction of gender and deviance were not part of the hypothesis, they were included in the analysis; gender was treated as a factor. Age and SES were treated as covariates in the multivariate analysis. Further, the three categories for the deviance factor were: Institutionalized deviants (MYC), Noninstitutionalized deviants (McMan) and Nondeviants (Regular Classroom).

The hypotheses of effect due to deviance was tested, using multivarite analysis of variance, for any differences among the three categories. Where significance was achieved, post hoc analyses were conducted, one of which specified a comparison of the two deviant categories with nondeviants.

Five variables were tested in the analysis:

(a) number of life change events
    (i) recent (within the past year)
    (ii) past (more than a year ago)
(b) cognitive appraisals of life change events
    (i) level of upsetness
    (ii) level of coping ability
(c) locus of control

To maintain the overall level of significance at .05 for the hypothesis, a multivariate analysis was conducted first and, if significant, followed by univariate F-tests for the five variables (set at $p<.01$).

Hypothesis 2 specified differences between types of deviants on six variables (the five previously outlined and an additional cognitive appraisal variable--level of personal responsibility. The categories for the types of deviants included: Conduct Problem (CP), Personality Problem (PP). There were too few subjects in the Socialized Delinquency (SD) and Inadequacy-Immaturity (II) categories for them to be tested (see Table 10).

The hypothesis of effect due to personality type was tested using multivariate analysis of variance, for any differences between the two categories.

Six variables were tested. Multivariate analysis was conducted and if significant, followed by univariate F-tests for the variables (set at $p<.01$).

Hypothesis 3 tested the differences among the personality types of deviants and nondeviants. If significance was achieved, post hoc analyses were conducted, two of which were comparisons of Conduct Problem and Nondeviants, and Personality Problem and Nondeviants.

Five of the six variables (level of personal responsibility was not completed for the nondeviant group) and the same analyses as for Hypotheses 1 and 2 were used.

Hypotheses 4 predicted positive correlations between number of life change events (past and recent) and locus of control. Significant relationships were also predicted between the cognitive appraisal scales and locus of control. These relationships were tested using Pearson product moment correlations.

CHAPTER IV

ANALYSIS AND RESULTS

The results are presented in five sections; the first four sections coincide with the four stated hypotheses. The fifth section reports additional descriptive information obtained from the Modified ALCES (MALCES) scale.

It should be noted that in the multivariate analysis, a number of cases were lost due to insufficient data on some of the scales. Three male subjects were lost from the Noninstitutionalized (McMan) group, making the total number of subjects for that group 39 rather than 42. The Regular Classroom group was reduced by three female cases, making the total number 93 rather than 96. As well, three male subjects were deleted from the Conduct Problem group (CP) of the Personality categories; the total for that group is 23, not 26.

Hypothesis I

Hypothesis I stated that deviant adolescents in both the MYC (Institutionalized) and McMan (Noninstitutionalized) groups would differ from nondeviant adolescents (Regular Classroom) on the three categories of dependent measures (five measures in all). That is, deviant adolescents would have a greater mean number of life change events, would appraise these events differently, and would be more external on the locus of control scale.

To test Hyposthesis one, multivariate analysis was used, followed by univariate analysis. The multivariate analysis provides an indication of the effect of deviance/nondeviance on all the dependent variables together, whereas the univariate analyses indicate the significance on each of the five variables.

Homogeneity Tests

One of the assumptions of the multivariate analysis of variance is homogeneity of variance-covariance across the six groups in the analysis (deviant institutionalized, deviant noninstitutionalized, nondeviant; female, male). The variables considered for the multivariate analysis of variance are the dependent variables: (Life Change Events (within the past year), Life Change Events (more than a year ago), Upsetness Scale, Coping Scale, Locus of Control), and the covariates, Age and SES. This was tested using Box's *M* test, a multivariate analog of Bartlett's test (Bock, 1975; Winer, 1971): $M = 197.70$, $F\ (140, 18389) = 1.220$, $p = .040$. The effect of lack of homogeneity of variance is unknown, but may confound the multivariate tests of significance, particularly in the case of unequal *n*'s (Boneau, 1962; Myers, 1972). Although the homogeneity of variance is not/a stringent assumption, to guard against the possibility of increased Type I error, the more conservative level of $p < .01$ has been used.

Inclusion of Covariates Age and SES

Within the groups there is overall multivariate significance of the covariates on the dependent measures. Based on Wilks' lambda (Rao, 1973), the following results were obtained: approximate $F\ (10, 306) = 2.475$, $p = .007$. Further analysis indicates that the significance of the covariates' relationship is due to the relationship of Age with two of the variables: Life Change Events (more than a year ago) and Locus of Control (see Table 14).

Due to the fact that only the "AGE" covariate appeared to be having

Table 14

Significance of Covariates to the Dependent Measures for Hypothesis I

Dependent Measures	Covariates	Significance of Within Cell Regression t	 p
Life Change Events (within past year)	Age	.231	.817
	SES	.612	.541
Life Change Events (more than a year ago)	Age	2.325	.021*
	SES	-.841	.402
Upsetness Scale	Age	-.483	.630
	SES	-.707	.481
Coping Scale	Age	1.813	.072
	SES	-.672	.503
Locus of Control	Age	-2.573	.011*
	SES	-.798	.426

*$p < .05$.

an effect, and because of missing SES information and therefore loss of certain cases (refer to Table 5), only Age was treated as a covariate in subsequent analyses.

Multivariate Tests

Based on the multivariate analysis of variance, the effect of Deviance, Gender, and their interaction were tested; Table 15 presents the results. The multivariate tests are based on approximate F statistics generated from the variance-covariance matrices associated with each of the specified effects with Age as a covariate (Rulon & Brooks, 1968).

For unbalanced designs (with disproportionate cell frequencies), the order by which effects are entered into the model affects their sum of squares (Rulon & Brooks, 1968). Since the effect due to deviance was of primary interest it was entered first; however, as a check against spurious significance it was also analysed by entering it last, or after the effects due to Gender and to the interaction of Deviance and Gender. The multivariate result was highly significant for deviance irrespective of the order, thus confirming the effect due to this variable. Furthermore, the interaction of Deviance and Gender did not achieve significance regardless whether it was entered first, second, or third in the analysis.

As shown in Table 15, there was no effect for the interaction of Deviance with Gender. There was an effect, however for Gender and for Deviance. Thus, there were differences between females and males, and among the deviance categories on the dependent variables. Since Gender was entered only as a control factor, rather than as a variable of

Table 15

Multivariate ANCOVA Results for Hypothesis I in the Order that the Effects Were Entered[a]

Source of Variance	Wilks'	df Effects	 Error	Approximate F Ratio	p[b]
1. Deviance	.46424	10	362	16.929	.000**
2. Gender (Females-Males)	.90255	5	181	3.909	.002**
3. Deviance x Gender	.93398	10	362	1.255	.253

[a] Age was entered as a covariate. [b] Due to the lack of homogeneity of variance, significance was set at the .01 level.

* $p < .01$. ** $p < .001$.

particular interest, further discussion is primarily limited to specifying differences for the Deviance categories.

Having demonstrated a significant multivariate effect, it is permissible to proceed to locate the effect more precisely. In order to determine which dependent variables were significantly affected, univariate F-tests were performed. In order to determine where the effect lay in relation to particular groups, a series of post-hoc comparisons was conducted to test specific predictions stated in the hypotheses: that is, the two deviant groups were combined and compared to the nondeviant group.

Univariate F-tests to Locate the Significant Dependent Measures

Univariate F-tests were conducted on each of the five dependent measures for the two main effects, Gender and Deviance. The ANCOVA results for the univariate F-tests with Age as covariate are presented in Tables 16, 17, and 18. The significance level was set at .01.

Differences for the Gender factor are evident only on the Upsetness scale of the Cognitive Appraisals. This means there was a main-effects significant difference between females and males in evaluating how upsetting the life change events were for them. Since Age was a significant covariate, the actual test of difference between females and males on the Upsetting Scale was based on the means adjusted for the covariate: females' adjusted mean was 150.78 and males' adjusted mean was 135.40 (see Table 19). Females in all three deviance groups have higher means, therefore finding the life change events more upsetting. These results concur with those presented by Mendez et. al (1980).

No other dependent measures reached significance at the .01 level

Table 16

Univariate ANCOVA Results for Life Change Events (Within Past Year and More Than a Year Ago)[a]

Source of Variance	Life Change Events							
	Within Past Year				More Than a Year Ago			
	Univariate				Univariate			
	MS	df[b]	F	p	MS	df[b]	F	p
Deviance	1329.10	2	56.93	.000**	1123.24	2	29.28	.000*
Gender	9.91	1	0.42	.516	32.49	1	0.85	.359 *
Deviance x Gender	114.86	2	4.92	.008*	33.25	2	0.87	.422

[a] Age was entered as a covariate. [b] df for error term = 185.

* $p < .01$ **$p < .001$.

Table 17

Univariate ANCOVA Results for Cognitive Appraisals (Upsetness and Coping)[a]

Source of Variance	Cognitive Appraisals							
	Upsetness				Coping			
	MS	*df*[b]	*F*	*p*	*MS*	*df*[b]	*F*	*p*
Deviance	16264.90	2	24.13	.000**	12880.26	2	21.24	.000*
Gender	7804.85	1	11.58	.001**	190.365	1	0.31	.576
Deviance x Gender	276.84	2	0.41	.664	488.24	2	0.81	.449

[a]Age was entered as a covariate. [b]*df* for error term = 185.

* $p < .01$ **$p < .001$.

Table 18

Univariate ANCOVA Results for Locus of Control

Source of Variance	Locus of Control			
	Univariate			
	MS	*df*	*F*	*p*
Deviance	414.81	2	14.01	.000*
Gender	90.72	1	3.06	.082
Deviance x Gender	46.20	2	1.56	.212

[a]Age was entered as a covariate. [b]*df* for error term = 185.

*$p < .001$.

Table 19

Means on the Dependent Variables Adjusted for the Age Covariate:

Post-Hoc Tests for Hypothesis I

	Deviance Categories			
Gender	Institutionalized	Noninstitutionalized	Regular Classroom	Total
	Life Change Events (within past year)			
Female	19.43	14.53	9.70	13.36
Male	16.39	17.77	9.40	13.73
Totals	17.91	16.36	9.57	13.54
	Life Change Events (more than a year ago)			
Female	19.23	18.37	11.69	14.78
Male	18.50	20.90	12.84	16.65
Totals	18.86	19.80	12.17	15.67
	Upsetness Scale			
Female	136.06	143.33	161.30	150.78
Male	120.05	126.90	152.00	135.40
Totals	128.06	134.06	157.40	143.49
	Coping Scale			
Female	133.55	135.01	154.05	144.76
Male	125.06	133.10	155.14	139.87
Totals	129.31	134.44	155.36	142.97
	Locus of Control			
Female	18.96	16.97	12.97	15.42
Male	15.53	16.73	12.45	14.50
Totals	17.24	16.84	12.75	14.98
	Number of Cases (*n*) for each Cell[a] on the Dependent Variables			
Female	30	17	54	101
Male	30	22	39	91
Total	60	39	93	192

---

[a] The number of cases per cell remained the same for each of the dependent variables.

for the Gender factor (refer to Tables 16, 17, and 18). However, an interaction of Deviance and Gender did occur for the Life Change Events (within the past year) despite there being no significant multivariate interactions. From the means presented in Table 19 it is apparent that females in the institutionalized setting have more Life Change Events (within past year) than do males, but the reverse is true for the Noninstitutionalized group--and essentially no gender difference occurred for the Regular Classroom Group.

The dependent variables significant for the Univariate F-tests for the Deviance factor at the .01 level are: Life Change Events (within the past year), Life Change Events (more than a year ago), Upsetness Scale, Coping Scale and Locus of Control. That is, there were significant differences for the three deviance categories (Institutionalized, Noninstitutionalized, and Regular Classroom) on all five dependent measures.

Post-Hoc Comparisons

A series of post-hoc comparisons were conducted to determine among /between which of the three groups (Institutionalized, Noninstitutionalized, Regular Classroom) the effects were occurring on the dependent variables. Age was treated as a covariate for all significance tests.

Initially, a comparison of the two deviant groups (Institutionalized and Noninstitutionalized) was conducted using multivariate analysis of covariance. There was a significant difference between the two groups: $F(5,181) = 3.35$, $p = .006$. The multivariate analysis was followed by univariate F-tests on each of the dependent measures to determine which variables differed significantly. As shown in Table 20 only the variable

Table 20

Univariate ANCOVA Results for Hypothesis I Comparing Two Groups of Deviant Adolescents on Five Dependent Variables[a]

Variable	Univariate _F_-Tests			
	_MS_	_df_[b]	_F_	_p_
Life Change Events (within past year)	225.94	1	9.67	.002*
Life Change Events (more than a year ago)	7.42	1	0.19	.660
Upsetness Scale	3074.95	1	4.56	.034
Coping Scale	2338.57	1	3.86	.051
Locus of Control	39.39	1	1.33	.250

[a] With Age as a covariate. [b] _df_ for error term = 185.

*$p < .01$.

Life Change Events (within the past year) differed significantly at the set level of .01. The means as shown previously in Table 18 indicated that the adolescents in the Institutionalized setting (MYC) have experienced a greater number of life change events in the past year.

Each of the two deviant groups was then compared to the Regular Classroom group. Comparing the Institutionalized group with the Regular Classroom group the results were as follows: multivariate F (5,181) = 21.28, p = .000. This was followed by univariate F-tests on each dependent variable. As shown in Table 21, all five dependent variables were significant at the .000 level. Similarly, a comparison of the Institutionalized group with the Regular Classroom group gave the following multivariate analysis results: F (5,181) = 21.87, p = .000. Univariate F-tests on the dependent variables showed all variables significant at the .000 level (see Table 22). Thus both deviant groups differed significantly on all five dependent measures from the nondeviant group. The direction of the means as shown previously in Tables 11, 12 and 13, are consistent with the predictions as stated in Hypothesis I. Means adjusted for the covariate Age are reported in Table 19; the direction of the difference is the same as for the unadjusted means.

Since both deviant groups differ significantly from the nondeviant groups these two groups can be combined and compared against the nondeviant group. This results in similar sizes of groups (MYC and McMan, n = 99; Regular Classroom, n = 93) and confirms the previous analysis. The multivariate analysis results with age as a covariate are as follows: F (5,181) = 36.48, p = .000. Univariate F-tests again reveal that all 5 dependent variables were significant at the .000 level

Table 21

Univariate ANCOVA Results Comparing Institutionalized Adolescents (MYC) and Regular Classroom Adolescents on Five Dependent Variables[a]

Variable	Univariate *F*-Tests			
	MS	*df*[b]	*F*	*p*
Life Change Events (within past year)	1491.28	1	63.83	.000*
Life Change Events (more than a year ago)	732.96	1	19.11	.000*
Upsetness Scale	18777.80	1	27.86	.000*
Coping Scale	14705.67	1	24.25	.000*
Locus of Control	402.12	1	13.58	.000*

[a]With Age as a covariate. [b]*df* for error term = 185.

*$p < .01$.

Table 22

Univariate ANCOVA Results Comparing Noninstitutionalized Adolescents (McMan) and Regular Classroom Adolescents on Five Dependent Variables[a]

Variable	Univariate F-Tests			
	MS	df[b]	F	p
Life Change Events (within past year)	1255.28	1	53.73	.000*
Life Change Events (more than a year ago)	1581.47	1	41.23	.000*
Upsetness Scale	14806.81	1	21.96	.000*
Coping Scale	11891.43	1	19.61	.000*
Locus of Control	454.54	1	15.35	.000*

[a] With Age as a covariate. [b] df for error term = 185.

*$p < .01$.

(see Table 23 for results).

In reviewing the overall significance of the preceding results, it is apparent that adolescents who have displayed a variety of behavioral and adjustment problems (Institutionalized and Noninstitutionalized Adolescents) differ in a number of ways from adolescents not so identified (Regular Classroom). While those in an institutionalized setting have reported a greater number of recent life change events than those in a noninstitutionalized setting, both of these groups report significantly greater number of life change events (both within the past year and over their lifetime) than the regular classroom group. That is, adolescents identified for behavioral problems report having to deal with a greater number of life changes and hence their coping resources have been taxed to a greater extent resulting in a greater degree of life stress.

Second, the deviant youth groups report that they find the life changes less upsetting than do the nondeviant youth. Mendez et. al (1980) reported similar results; youth who had experienced the life changes events found them less upsetting than youth who had not experienced the events. Since the deviant youth have actually experienced more changes their responses are based more on personal experience than on projections of "how upset they think they would be", as would be the case for the nondeviant youth. A reasonable hypothesis is that the deviant youth are more desensitized to these events due to their experiences while the nondeviant youth maintain an anticipatory fear or anxiety about stressful life events.

Deviant adolescents also report that they think they would cope with or deal with life change events (relative to others their age) better

Table 23

Univariate ANCOVA Results Comparing Deviant Adolescents (Institutionalized) and Noninstitutionalized) and Nondeviant Adolescents (Regular Classroom) on Five Dependent Variables[a]

Variable	Univariate *F*-Tests			
	MS	*df*[b]	*F*	*p*
Life Change Events (within past year)	2509.01	1	107.39	.000*
Life Change Events (more than a year ago)	2246.47	1	58.57	.000*
Upsetness Scale	30422.68	1	45.13	.000*
Coping Scale	24172.87	1	39.86	.000*
Locus of Control	807.37	1	27.27	.000*

[a] With Age as a covariate. [b] *df* for error term = 185.

*$p < .01$.

than do the nondeviant adolescents. Again, the deviant adolescents have in fact experienced and survived more changes than the nondeviant youth.

In spite of reporting less anxiety (less upset by events) and a greater sense of coping ability (ability to deal with events compared to similar aged youth), these deviant youth are more external on the locus of control measure than the nondeviant adolescents. That is, although these youth perceive themselves to cope better than their nondeviant counter-parts, they do not feel more personally (internally) in control of what happens to them. They perceive consequences to be more independent of their own behavior and that forces outside their control are in charge rather than themselves. In contrast, nondeviant youth perceive more personal control over what happens to them. It could be hypothesized that there is a more fatalistic attitude on the part of deviant youth perhaps due to the many changes they have experienced or conversely perhaps the attitude helped bring on some of the changes. The results as presented are consistent with the predictions of Hypothesis I.

Hypothesis II

Hypothesis II was a test of the effects of the personality categories (CP, PP), gender, and their interaction on six dependent variables: Life Change Events (within the past year), Life Change Events (more than a year ago), Upsetness Scale, Responsibility Scale, Coping Scale, and Locus of Control. As in Hypothesis I, multivariate analysis followed by univariate F-tests were used.

Homogeneity Tests

As for Hypothesis I, the homogeneity of variance-covariance for the six dependent measures across the four groups in the analysis (personality categories, gender) was tested. This was tested with the covariates, Age and SES, and without the covariates since the covariates were not found to be significant and were removed from the analysis. With the covariates, the result of Box's M test was as follows: $M = 130.57$, F (72, 3126) = 1.18, $p = .139$. Without the covariates, the result was: $M = 58.98$, F (42, 4744) = 1.10, $p = .298$. Since homogeneity can be assumed, the level of significance for the multivariate test was set at the .05 level.

Exclusion of Covariates Age and SES

Within the groups there was no multivariate significance of the covariates on the dependent measures. Based on the Wilks' lambda (Rao, 1973), the following result was obtained: approximate F (12, 62) = 0.880, $p = .571$. Given this result the covariates were not included in subsequent analyses.

Multivariate Tests

Based on the multivariate analysis of variance, the effect of personality types, gender, and their interaction were tested; Table 24 presents the results. Due to the fact of unequal sized groups the design is nonorthogonal and the order of testing for effects becomes significant. Since the effect due to personality was of primary interest it was entered first into the model. However, even when entered last into the model, it was significant, indicating the strength of the effect of this variable. Gender also produced a significant effect, but the interaction did not.

Univariate F-tests to Locate the Significant Dependent Measures

Univariate F-tests were conducted on each of the six dependent measures for the two main effects, Gender and Personality. Due to the

Table 24

Multivariate ANOVA Results for Hypothesis II in the Order that the Effects were Entered

Source of Variance	Wilks	*df*		Approximate	
		Effects	Error	*F*-Ratio	*p*
Personality	.59401	6	42	4.78	.001**
Gender (Females-Males)	.74350	6	42	2.41	.043*
Personality x Gender	.88536	6	42	0.90	.500

*$p < .05$. **$p < .01$.

number of variables being tested, the significance level for the F-test was set at .01.

Differences for the Gender factor are evident on the Locus of Control variable only at the .01 level (see Table 25). That is, there is a significant difference between males and females in the degree to which they feel externally controlled. A comparison of the means reveals females more external in their orientation than males: respectively, the means are 21.34 and 16.13. Females who were identified in either of the Personality categories feel in less personal control of consequences and outcomes than do males.

Differences at the .01 level for the Personality factor were evident on three dependent variables, as indicated by univariate F-tests (see Table 26). The Personality groups differed in the degree to which they reported Life Change Events to be upsetting (Upsetness Scale), the degree to which they reported feeling responsible for the events (Responsibility Scale), and the rating of their coping ability (Coping Scale). The means of the groups (Table 27) show the results to be consistent with the predictions as stated in Hypothesis II. The Conduct Problem group reported that life change events were less upsetting than the Personality Problem group. Second, the Conduct Problem group reported feeling less personally responsible for the occurrence of life changes. Finally, the Conduct Problem group perceived themselves as being better able to cope with life changes than the Personality Problem group (the lower the means the better the stated coping ability). These results are consistent with the personality characteristics as previously described (Quay & Parsons, 1971; Quay & Peterson, 1979). That is, the Personality Problem group is

Table 25

Univariate ANOVA Results for Hypothesis II Comparing Males and Females on Six Dependent Measures

Variable	Univariate _F_-Tests			
	_MS_	_df_[a]	_F_	_p_
Life Change Events (within past year)	10.10	1	0.29	.593
Life Change Events (more than a year ago)	2.26	1	0.04	.845
Upsetness Scale	3654.82	1	5.06	.029
Responsibility Scale	695.10	1	0.93	.340
Coping Scale	410.21	1	0.71	.404
Locus of Control	318.10	1	9.38	.004*

[a] _df_ for error term = 47.

*$p < .01$.

Table 26

Univariate ANOVA Results for Hypothesis II Comparing Conduct Problem (CP) and Personality Problem (PP) Adolescents on Six Dependent Variables

Variable	Univariate F-Tests			
	MS	df[a]	F	p
Life Change Events (within past year)	58.32	1	1.722	.196
Life Change Events (more than a year ago)	37.92	1	2.459	.124
Upsetness Scale	8279.24	1	11.467	.001*
Responsibility Scale	10040.70	1	13.398	.001*
Coping Scale	7171.56	1	12.401	.001*
Locus of Control	16.23	1	0.477	.493

[a] df for error term = 47.

*$p < .01$.

Table 27

Means and Standard Deviations for Conduct Problem (CP) and Personality Problem (PP) Adolescents on Six Dependent Variables

Dependent Variables	Personality Category[a]	Gender	Mean	SD
Life Change Events (within past year)	CP	Female	18.50	6.09
		Male	19.47	6.69
	PP	Female	17.53	5.46
		Male	15.30	6.21
Life Change Events (more than a year ago)	CP	Female	21.17	8.16
		Male	17.71	10.25
	PP	Female	20.07	3.81
		Male	23.00	6.61
Upsetness Scale	CP	Female	147.30	27.32
		Male	123.88	29.28
	PP	Female	162.28	25.86
		Male	147.88	24.37
Responsibility Scale	CP	Female	119.04	17.98
		Male	111.03	30.33
	PP	Female	144.99	32.08
		Male	137.24	19.31
Coping Scale	CP	Female	136.83	33.81
		Male	132.89	25.90
	PP	Female	161.14	21.12
		Male	153.83	19.34
Locus of Control	CP	Female	20.50	6.66
		Male	16.65	6.42
	PP	Female	21.67	4.59
		Male	15.46	5.92

[a] The n for the CP groups was 23 (6 females, 17 males); the n for the PP group was 28 (15 females, 13 males).

representative of individuals who are more neurotic or anxious, while the Conduct Problem group represents individuals whose personal needs overtake the needs of others and who appear to be lacking in feeling and social awareness.

Contrary to the predictions as stated in Hypothesis II, the Conduct Problem group did not have a greater number of life change events in the past (Life Change Events more than a year ago), nor did the Personality Problem group have a greater number of life change events within the past year (Life Change Events within the past year). Also contrary to the prediction, Conduct Problem adolescents were not more external on the Locus of Control measure than Personality Problem adolescents. Thus, it would appear that although life circumstances, as measured by number of life change events, do not distinguish the groups, perceptions (Cognitive Appraisals) of life change events do distinguish them. The present evidence is supportive of the contention that is not the events themselves that are of prime importance, but rather the perceptions of and attitudes towards the events which must be considered when evaluating the impact of life change events (cf., Lazarus, 1977; Weiner, 1980). Further support for this view is provided from the results of a Chi-square analysis which tested which life change events were differently endorsed by the two personality groups. Only one of the 50 Life Change event items was significant, and this was at the .05 level: proportionally more of the CP youth reported "Quitting School" within the past year than PP youth. Therefore neither number nor type of event distinguished the two groups.

Correlations of T-scores of Personality Categories with the Dependent Measures

The composite T-scores (based on combining the three measures BPC, POS, and CHS as described in Chapter 3) of each of the Personality categories (CP, PP, II, and SD) for the total deviant sample of 102 subjects (MYC and McMan subjects) were correlated with each of the six dependent variables (see Table 28).

As shown in Table 28, Life Change Events (within the past year) is significantly correlated with the CP (Conduct Problem) and SD (Socialized Delinquency) personality scores. Unlike what was predicted PP (Personality Problem) was not positively correlated to Life Change Events (within the past year). Also somewhat contrary to prediction was the relationship of CP to the Life Change Events scale; CP was significantly related to the recent life change events (within the past year), but not to past number of life change events (more than a year ago).

Consistent with predictions are the significant negative correlations between the CP score and each of the Cognitive Appraisal Scales (Upsetness, Responsibility, and Coping). As for the PP score, although the correlations are not significant, they are in the direction predicted. Both the CP and PP scores are significantly related to the locus of control variable.

Of ancilliary interest is the relationship of the II (Inadequacy-Immaturity) score to a number of variables. The score on this category is negatively correlated with each of the Cognitive Appraisal scales. Also, the SD score is negatively correlated with the Coping Scale of the Cognitive Appraisals.

Table 28

Correlations of Composite _T_-scores for Four Personality Categories with the Six Dependent Variables[a]

Dependent Variables	Personality Categories			
	CP	PP	II	SD
Life Change Events (within past year)	.17*	-.02	-.15	.28**
Life Change Events (more than a year ago)	-.08	-.01	-.11	.14
Upsetness Scale	-.36**	.02	-.26**	-.14
Responsibility Scale	-.33**	.04	-.22*	-.04
Coping Scale	-.39**	.07	-.32**	-.26**
Locus of Control	.19*	.38**	-.06	.01

[a] The total _n_ for each dependent variable was 102.

*$p < .05$ **$p < .01$.

Hypothesis III

Hypothesis III compared nondeviant adolescents (Regular Classroom group) with deviant adolescents as distinguished by the personality categories. Since there were insufficient numbers in the II and SD categories, only the CP and PP categories were used. That is, the Regular Classroom (RC), Conduct Problem (CP) and Personality Problem (PP) groups were compared on five dependent measures. Multivariate analysis of variance followed by univariate F-tests and post-hoc comparisons were used to test the relationships.

Homogeneity Tests

The homogeneity of variance-covariance across the six groups in the analysis (personality categories, gender) was tested. The dependent variables tested in the multivariate analysis of variance included: Life Change Events (within the past year), Life Change Events (more than a year ago), Upsetness Scale, Coping Scale, and Locus of Control. These were initially tested for homogeneity with Age and SES as covariates. The result using Box's M test was as follows: $M = 164.17$, $F (112,5764) = 1.17$, $p = .114$. This result shows the groups to be homogeneous.

However, due to the fact that the covariates Age and SES were not significant, the analysis was re-run without the covariates Age and SES, and the homogeneity of variance was again tested. The results using Box's M test were: $M = 150.91$, $F (75,2856) = 1.63$, $p = .001$. Excluding the covariates, results in nonhomogeneous groups. As with Hypothesis I, a more conservative level of $p < .01$ was used to guard against increased Type I error.

Exclusion of Covariates (Age and SES)

Within the groups there was no multivariate significance of the covariates on the dependent measures. Based on Wilks' lambda test, the following result was obtained: approximate F (10,230) = 1.75, $p = .07$. Given this result, and the fact that SES information is missing on a number of cases (see Table 5), the covariates were not included in subsequent analyses.

Multivariate Tests

The multivariate analysis of variance testing for the effects of personality types, gender, and their interaction is presented in Table 29. The effect due to personality type was of primary interest, and therefore was entered first into the analysis. However, even when entered last into the model, it was significant, confirming the strength of the effect of this variable. There was no significance for the interaction of Deviance with Gender, nor for the main effect Gender at the set minimum of $p < .01$.

In order to determine which specific dependent variables were significantly affected, univariate F-tests were performed. Second, to determine where the effect lay in relation to particular groups, a series of post-hoc comparisons was tested.

Univariate F-tests to Locate the Significant Dependent Measures

Univariate F-tests were conducted on each of the five dependent measures for the main effect Personality at a significance level of .01. The ANOVA results for the univariate F-tests are presented in Table 30; all five dependent measures are highly significant.

Table 29

Multivariate ANOVA Results for Hypothesis III in the Order that the Effects were Entered

Source of Variance	Wilks	df		Approximate	
		Effects	Error	F-Ratio	p[a]
Deviance	.40899	10	268	15.11	.000*
Gender (Females-Males)	.90345	5	134	2.86	.017
Deviance x Gender	.87939	10	268	1.78	.064

[a] Due to the lack of homogeneity of variance, significance was set at a minimum level of .01.

*$p < .01$.

Table 30

Univariate ANOVA Results for Hypothesis III Comparing Three Groups of Adolescents (Regular Classroom, CP, and PP) on Five Dependent Variables

Dependent Variable	Univariate *F*-Tests			
	MS	*df*[a]	*F*	*p*
Life Change Events (within past year)	865.16	2	40.43	.000*
Life Change Events (more than a year ago)	891.91	2	25.28	.000*
Upsetness Scale	13502.17	2	21.76	.000*
Coping Scale	9683.26	2	18.81	.000*
Locus of Control	433.27	2	14.15	.000*

[a] *df* for error term = 138

*$p < .01$

Post-Hoc Comparisons

A series of post-hoc comparisons was conducted to determine which of the three groups (Regular Classroom, CP, and PP) was accounting for the effects with respect to the dependent variables.

Considering the Personality Problem (PP) group versus the Regular Classroom (RC) group, the multivariate analysis of variance produced a significant difference: F (5,134) = 13.92, p = .000. Univariate F-tests revealed that three of the five dependent variables were significant at the .01 level (see Table 31).

An examination of the means (refer to Table 32) shows that adolescents classified in the PP group have experienced a greater number of life change events both in the last year and in the past than students in the Regular Classroom. Further, the PP youth perceive less personal control over life circumstances, being more external on the locus of control measure. For youth in the PP classification, number of life changes is associated with perceptions of lack of control.

The PP and Regular Classroom youth do not differ, however, in their appraisals (level of upsetness, degree of coping ability) of life change events. Despite the fact that their life experiences differ significantly, their perceptions of life experiences do not.

Considering the Conduct Problem (CP) group versus the Regular Classroom group, the multivariate analysis of variance produced a significant difference: F (5,134) = 19.66, p = .000. Univariate F-tests revealed that three of the five dependent variables were significant at the set minimum of .01 (refer to Table 33).

An examination of the means as presented in Table 32, shows that the

Table 31

Univariate ANOVA Results for Hypothesis III Comparing Personality Problem versus Regular Classroom Adolescents on Five Dependent Variables

Dependent Variable	Univariate F-Tests			
	MS	df[a]	F	p
Life Change Events (within past year)	798.43	1	37.31	.000*
Life Change Events (more than a year ago)	1557.82	1	45.10	.000*
Upsetting Scale	3568.70	1	5.90	.016
Coping Scale	1188.40	1	2.31	.131
Locus of Control	673.00	1	21.99	.000*

[a] df for error term = 138.

*$p < .01$.

Table 32

Means and Standard Deviations for Conduct Problem (CP) and Personality Problem (PP), and Regular Classroom Adolescents on Five Dependent Variables

Dependent Variables	Group	Gender	Mean	SD
Life Change Events (within past year)	CP	Female	17.33	5.43
		Male	18.06	6.58
	PP	Female	16.80	5.03
		Male	14.23	5.80
	RC	Female	9.67	4.36
		Male	9.31	3.02
Life Change Events (more than a year ago)	CP	Female	20.00	7.01
		Male	16.12	9.63
	PP	Female	19.20	3.57
		Male	21.46	6.16
		Female	11.43	4.91
		Male	12.48	5.44
Upsetness Scale	CP	Female	137.17	24.76
		Male	114.21	26.62
	PP	Female	148.78	22.44
		Male	140.49	21.55
	RC	Female	161.65	21.61
		Male	152.88	29.84
Coping Scale	CP	Female	124.69	27.10
		Male	121.21	24.16
	PP	Female	146.05	20.06
		Male	148.26	25.26
	RC	Female	154.05	20.18
		Male	155.14	24.56
Locus of Control	CP	Female	20.50	6.66
		Male	16.65	6.42
	PP	Female	21.67	4.59
		Male	15.46	5.92
	RC	Female	13.24	5.49
		Male	13.13	5.20

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[a]The n for the CP groups was 23 (6 females, 17 males); the n for the PP group was 28 (15 females, 13 males); the n for the Regular Classroom group was 93 (54 females, 39 males).

Table 33

Univariate ANOVA Results for Hypothesis III Comparing Conduct Problem versus Regular Classroom Adolescents on Five Dependent Variables

Dependent Variable	Univariate *F*-Tests			
	MS	*df*[a]	*F*	*p*
Life Change Events (within past year)	931.89	1	43.54	.000*
Life Change Events (more than a year ago)	226.01	1	6.54	.012
Upsetting Scale	23345.64	1	37.63	.000*
Coping Scale	18178.13	1	35.31	.000*
Locus of Control	193.54	1	6.32	.013

[a] *df* for error term = 138.

$^*p < .01$.

CP group has experienced significantly more life change events within the past year than the Regular Classroom group. The CP group also reported that the life change events were less upsetting. Finally, the CP group reported significantly better coping ability with respect to life changes than the Regular Classroom group. The two groups did not differ significantly on life change events more than a year ago, nor on locus of control.

In comparing adolescents who have been designated as antisocial by both social institutions and a personality classification, with adolescents not so identified, an interesting picture emerges. The CP youth have experienced more life changes and in a way appear to be desensitized to the emotional impact of these events. This apparent lack of emotional reactivity is consistent with the characterization of the CP youth as presented in Chapter II. Further, these youth, when compared with youth who have not evidenced behavioral problems, state that they cope better with life changes. It might be hypothesized that due to the fact that these youth have experienced so many life changes, they perceive themselves as coping quite well (and better than their peers would) given the circumstances. The non-problem youth on the other hand, are for the most part projecting how they think they would cope and find the events more fearful and threatening. Conversely, it could be argued that the CP youth have a distorted perception of their coping ability. That is, they do not recognize that their present behaviors would indicate difficulty in coping; they do not see any relationship between their present behaviors and their coping patterns.

It is also clear that there is another group of problem youth (PP) who, like the CP youth, have experienced significantly more life changes than the Regular Classroom (non-problem) youth, but whose perceptions of these events differ significantly from those of the CP youth. The PP youth are more like the Regular Classroom youth in their perception of these life changes, but feel more out of control (more external on the locus of control measure than the Regular Classroom youth).

The personality characterizations of the CP and PP youth presented in this research are consistent with previous studies (eg., Genshaft, 1980; Luegar, 1980; Quay 1979) which contrast the more anxious neurotic style of the PP group with the psychopathic, unresponsive style of the CP group.

Hypothesis IV

Hypothesis IV predicted positive correlations between the Locus of Control Scale and both Life Change Event scales (within the past year and more than a year ago). The Locus of Control Scale was also expected to be related to the Upsetness and Responsibility scales in a negative direction, while the relationship with the Coping Scale was expected to be in the positive direction. That is, as externality increases the level of upsetness, responsibility and perceived coping decrease. The results are presented in Table 34. As indicated previously, the Responsibility Scale was not administered to the Regular Classroom group.

As predicted, there is a significant positive relationship between Locus of Control and Life Change Events. Adolescents who have experienced more life changes also perceive less personal control over outcomes (more external on the Locus of Control scale). Second, as externality increases, the degree to which adolescents report being upset by life changes, decreases (Upsetness Scale). Therefore, one would expect adolescents who have experienced many life changes to feel that there is little they can do to alter life circumstances and to be somewhat desensitized to the emotional impact of numerous life changes (events which are largely negative in nature).

The relationship between Locus of Control and the Responsibility Scale is not significant. It was expected that stated responsibility for the occurrence of life change events would be significantly correlated with general feelings of control. That is, adolescents who feel externally controlled would also be expected to state less personal responsibility for life changes. The lack of significance could be explained in terms of attributional theory. That is, these may be adolescents who are characterized by a depressive type of hopelessness as described by Melges and Bowlby (1969). These are individuals who blame themselves for what has happened but also have given up, feeling that any personal action taken will not result in the desired outcome.

The relationship between the Locus of Control and the Coping Scale is not significant. It was expected that externally oriented individuals would also perceive themselves as coping less well (as compared to their peers) with life changes.

Table 34 presents other significant relationships in addition to those discussed above. The two Life Change Event scales are quite highly correlated (.64). It would appear that many life change events extend over a period of years or are repeated over the years. Similar results were reported by Newcomb et al. (1981).

Further, it is apparent that number of life change events is

Table 34

Correlation Matrix for the Six Dependent Measures

Measures	Life Change Events (within past year)	Life Change Events (more than a year ago)	Upsetting Scale	Responsiblity Scale	Coping Scale	Locus of Control
Life Change Events (within past year)	—	.64**	-.31*	.08	-.21**	.37**
Life Change Events (more than a year ago)	—	—	-.29**	.15	-.08	.27**
Upsetness Scale	—	—	—	.62**	.54**	-.18*
Responsibility Scale	—	—	—	—	.30**	-.01
Coping Scale	—	—	—	—	—	.01
Locus of Control	—	—	—	—	—	—

[a] With the exception of the Responsibility Scale (which was administered to the MYC and McMan groups only, n = 101), the correlations are based on the total 198 subjects.

*p < .05. **p < .01.

significantly associated with less reported emotional impact of the events (Life Change Events and Upsetness Scale).

There is a significant negative relationship between number of recent life change events (Life Change Events--within the past year) and perceived coping ability (Coping Scale). Unlike what might be expected, youth who have experienced many recent changes perceive themselves as coping better than those who have not experienced as many life changes. The relationship between past life changes (Life Change Events--more than a year ago) and coping ability (Coping Scale) is in the same direction as recent life changes and coping ability, but it is not significant.

It is also evident that greater emotional impact (as measured by the Upsetness Scale) is significantly associated with greater felt personal responsibility (Responsibility Scale) and less felt coping ability (Coping Scale). As would be expected, there is a significant negative correlation of the Upsetness Scale with the Locus of Control scale. In general those youth who are more upset by life changes, also perceive more personal control over their lives (more internal than external on the locus of control measure). Finally, individuals who assume more personal responsibility (Responsibility Scale) for life change, also tend to perceive themselves as coping less well with these life changes than others in their age group.

Life Change Events

Given that there were differences between deviant and nondeviant adolescents in number of life change events (both within the past year and more than a year ago), the individual events were analyzed in order to determine which specific events distinguished deviant from nondeviant adolescents.

The percentage of subjects in the two groups, deviant (MYC and McMan combined) and nondeviant (Regular Classroom), endorsing each of the specific life change events were compared using Chi-square analysis (See Table 35). The results are presented separately for each of the two Life Change Event Scales.

For the Life Change Events (within the past year) significant differences were obtained at the .05 level on 31 items and at the .01 level on 26 items. Since there were 45 items tested for significance these results must be interpreted with caution, although it gives some indication of the kinds of events that should be researched further. The 26 items achieving significance at the .01 level are listed below; for all but one item the percentage endorsement was higher in the deviant group.

4. Starting a new school
5. Hassling with brother or sister (higher for nondeviant group)
6. Getting into drugs or alcohol
9. Moving to a new home
10. Failing one or more subjects in school
12. Being arrested by police
13. Having someone new move in with your family
15. Getting badly hurt or sick
16. Quitting school
19. Family member having trouble with alcohol
20. Close girlfriend getting pregnant
21. Breaking up with close girlfriend or boyfriend

23. Parent or relative getting very sick

24. Close friend dying

25. Trouble with teacher or principal

26. Flunking a grade in school

29. Starting a new job

30. Losing a job

32. Wrecking the car

41. Ran away from home

42. Separated, divorced or widowed parent dating

44. Thought about suicide

46. Family had money problems

48. Stole something valuable

49. Finding out about being adopted

50. Parent remarrying.

A similar analysis of the Life Change Events (more than a year ago) scale reveals 30 items significant at the .05 level and 26 at the .01 level. Those significant at the .01 level are listed below; again for all but one item the percentage endorsement is higher for the deviant group.

3. Problems with dating

5. Hassling with brother or sister (higher for nondeviant group)

6. Getting into drugs or alcohol

10. Failing one or more subjects at school

12. Being arrested by police

15. Getting badly hurt or sick

16. Quitting school

19. Family member having trouble with alcohol

20. Close girlfriend getting pregnant
21. Breaking up with girlfriend or boyfriend
22. Parents getting divorced or separated
24. Close friend dying
25. Trouble with teacher or principal
26. Flunking a grade in school
29. Starting a job
30. Losing a job
32. Wrecking the car
41. Ran away from home
42. Separated, divorced or widowed parent dating
43. Increased pressure from friends
44. Thought about suicide
46. Family had money problems
47. Parents argued or fought continually
48. Stole something valuable
49. Finding out about being adopted
50. Parent remarrying

When each of the two deviant groups are considered separately against the Regular Classroom group there are a few additional items which are significant (using Chi-square analysis). The Institutionalized (MYC) group has experienced significantly more "sibling deaths" than the Regular Classroom group, both within the past year and more than a year ago. The Noninstitutionalized (McMan) group has experienced more "deaths of a father" than the Regular Classroom group on the scale Life Change Events--more than a year ago.

Table 35

Differences in Percentages of Deviant (McMan and MYC) and Nondeviant (Regular Classroom) Adolescents who Endorsed the Life Change Event Items[a]

Life Change Event	Endorsed Life Change Events (within the past year) Nondeviant	Deviant	Endorsed Life Change Events (more than a year ago) Nondeviant	Deviant
(Numbers of adolescents)	(96)	(102)	(96)	(102)
1. Hassling with parents	79%	81%	71%	81%
2. Change in physical appearance (braces, glasses)	33	32	46	35
3. Problems with dating	33	25	20	39**
4. Starting a new school	31	53**	60	67
5. Hassling with brother or sister	84**	65	87**	67
6. Getting into drugs or alcohol	29	72**	21	69**
7. Losing a favorite pet	35	38	61	57
8. Mother getting pregnant	—	8	—	41
9. Moving to a new home	17	58**	70	67
10. Failing one or more subjects in school	16	71**	16	70**
11. Death of mother	0	1	0	5
12. Being arrested by police	0	69**	0	56**

Table 35 (continued)

Life Change Event	Endorsed Life Change Events (within the past year)		Endorsed Life Change Events (more than a year ago)	
	Nondeviant	Deviant	Nondeviant	Deviant
13. Having someone new move in with your family (grandparents, adopted brother or sister, or other)	7%	25%**	19%	25%
14. Parent losing a job	13	28*	13	27*
15. Getting badly hurt or sick	15	45**	39	64**
16. Quitting school	0	38**	0	21**
17. Brother or sister dying	0	4	2	8*
18. Brother or sister getting married	7	10	8	15
19. Family member (other than yourself) having trouble with alcohol	10	43**	17	47**
20. Close girlfriend getting pregnant	5	29**	1	23**
21. Breaking up with close girlfriend or boyfriend	39	61**	34	58**
22. Parents getting divorced or separated	5	18*	21	62**
23. Parent or relative in your family (other than yourself) getting very sick	43	62**	61	69
24. Close friend dying	9	28**	15	39**
25. Trouble with teacher or principal	19	67**	24	68**

Table 35 (continued)

Life Change Event	Endorsed Life Change Events (within the past year) Nondeviant	Endorsed Life Change Events (within the past year) Deviant	Endorsed Life Change Events (more than a year ago) Nondeviant	Endorsed Life Change Events (more than a year ago) Deviant
26. Flunking a grade in school	6%	37%**	10%	47%**
27. Making new friends	87	89	88	86
28. Problems with menstral periods (for girls only)[b]	—	39	—	29
29. Starting a job	31	51**	28	47**
30. Losing a job	4	41**	5	39**
31. Problems with acne	48	33*	28	20
32. Wrecking the car	3	23**	0	20**
33. Getting grounded	44	57	54	72*
34. Not making an extra-curricular activity (i.e., athletic, team, band, etc.)	22	23	20	30
35. Death of father	2	2	3	12*
36. Problems with size (too tall, too short, too heavy)	43	48	35	47
37. Sister getting pregnant	—	14	—	18
38. Brother getting someone pregnant	—	8	—	5
39. Death of a relative (such as grandparent, cousin, uncle, etc.)	25	42*	66	69

Table 35 (continued)

Life Change Event	Endorsed Life Change Events (within the past year)		Endorsed Life Change Events (more than a year ago)	
	Nondeviant	Deviant	Nondeviant	Deviant
40. Getting pregnant/ getting someone pregnant	--%	12%	--%	9%
41. Ran away from home	1	54**	8	68**
42. Separated, divorced or widowed parent dating	13	38**	15	43**
43. Increased pressure from friends	42	51	19	49**
44. Thought about suicide	19	48**	15	42**
45. Parent/relative in serious accident	15	19	21	34
46. Family had money problems	16	51**	21	52**
47. Parents argued or fought continually	7	33*	27	62**
48. Stole something valuable	3	56**	7	50**
49. Finding out about being adopted	0	11**	4	17**
50. Parent remarrying	1	14**	11	29**

[a]Chi-square analysis was used to test for significant differences between number of Deviant and Nondeviant adolescents endorsing each life change event. [b]Item did not appear in the scale for nondeviant (Regular Classroom) adolescents.

*$p < .05$. **$p < .01$.

The nondeviant group endorsed one event significantly more than the deviant groups. For both of the Life Change Events Scales, the nondeviant group endorsed "Hassling with brother or sister" to a significantly greater degree.

Additional Life Change Events Information

Subjects in all three groups were given the opportunity to add additional Life Change Events to the MALCES (Modified Adolescent Life Change Event Scale).

Items included for the Regular Classroom sample are as follows:

1. World going crazier (nuclear arms)
2. Mother quitting job and becoming a worse alcoholic and moving in with another guy
3. Dad leaving me
4. Dad quit job
5. Moving from one country to another
6. Doing bad or failing in something
7. Bothered by parents because hanging around kids or drugs
8. Parents living common-law
9. Being bugged by a friend for no reason
10. Tried pot
11. Decisions about yourself to mature
12. Best friend getting hurt
13. Getting into a serious fight.

Some of these items, eg., nuclear war are not covered by the scale but a good number are.

Items that were added by the subjects from the Noninstitutionalized

(McMan) group include:

1. Mother had a miscarriage
2. Classmate dying
3. Being raped
4. Beating on you
5. Falling in love
6. Moving in with someone you hardly know
7. Someone hating you--close friend or family
8. Playing hooky
9. Have not seen father in 3 years (not know if dead or not)
10. People not trusting you
11. Can't have babies
12. Friend murdered.

The Institutionalized (MYC) group submitted the most additional items. They are:

1. Being remanded
2. Getting in a fight
3. Father beating up
4. Father having sex
5. Family hating you
6. Toke up
7. Overdose
8. Feeling insane
9. Wanting to hurt other people and having problems
10. Sister raped--bitter, want to kill the guy
11. Breaking up with family

12. Getting locked up
13. Have trouble in school due to drugs or alcohol
14. Had problems with boyfriends and dating them
15. Getting into trouble
16. Going to the Youth Centre
17. Having trouble with family due to drugs or alcohol
18. Had problem without seeing a doctor
19. Accused for thing never done.

As can be seen, there are a number of additional items which would have provided useful information had they been included in the scale. In particular, items related to physical and sexual abuse, as well as more items related to family dynamics, would have been informative.

The vast majority of subjects did not include any additional items. Also, there were not enough repetitions of any of the items to conduct any further analysis.

CHAPTER V

DISCUSSION AND CONCLUSIONS

The major question posed in this research related to examining the relationship between adolescent antisocial behavior and life change events. Additionally, it was important to examine perceptions of life change events (cognitive appraisals) and perceptions of control (locus of control). Further, previous research demonstrated the validity of identifying personality types within the larger grouping of antisocial (deviant) adolescents. The personality types were also examined according to life change events, cognitive appraisals and locus of control.

It was hypothesized that deviant adolescents would be distinguished from nondeviant adolescents in number of life change events, perceptions of life change events (cognitive appraisals) and locus of ocntrol. Also, it was hypothesized that the personality types would differ on the variables of life change events, perceptions of the events, and cognitive appraisals. Differences in type of life change events were also examined in relation to the various groupings, i.e., deviant vs. nondeviant, personality types.

In the following discussion, the hypotheses and results are organized according to the major research topics. In addition, there is a discussion of the results in relation to the developmental process of adolescence and a presentation of the implications of the research.

Life Change Events

The present results are supportive of previous research (e.g., Coddington, 1979; Gersten et al., 1974; Vincent & Rosenstock, 1979) which has shown a significant relationship between number of life change eventst and adjustment problems. More specifically, the present results show tha youth who have been identified as antisocial have significantly more life change events in the recent past and over their life-time than youth not so identified. Antisocial youth in an institutionalized setting (MYC) also have significantly more recent life changes than those in a noninstitutionalized setting (McMan). This result is similar to those presented for adult criminal populations (Ciccone & Kaslay, 1979; Masuda et al., 1978). Individuals who have experienced more life change events (particularly those of a negative nature) are under greater stress. That is, their coping resources are being taxed to a greater degree. Schlesinger and Revitch (1980) state that:

> Violent and criminal behavior, as a consequence of stress, is virtually ignored. One of the few to recognize the relationship of stress and crime is Hallede (1971), who regards crime as a kind of adaptation to life's stresses. (p. 175)

Using case histories Schlesinger and Revitch (1980) go on to describe a variety of external and internal stresses that can lead to crime. External and internal stresses also interact to produce stress-related reactions. For example, external stresses such as family conflict or loss of a job can upset the individual's psychic equilibrium by touching off a deeply rooted inner conflict. The inner tension which is created can result in an act of violence which is followed by relief. As stated by Schlesinger and Revitch (1980):

> Episodic dyscontrol (outbursts, attacks, assaults, social offenses) is the result of the ego's failure

> to adapt to strain; at the same time it is an avoidance of lower level adaptation, such as psychosis. According to Menninger (1966, p. 32), "The strain resulting from attempted adaptation with inadequate powers may reach the point where it is a choice of breaking or being broken. . . . Sometimes something must yield, and a 'crime' is committed to prevent a crack. . . . Internal balance is thus and thereby reestablished." (p. 182).

Schlesinger and Revitch (1980) also point out that adolescents, as well as immature and impulsive people are more sensitive to stress and may respond to stressful situations in an antisocial manner. Adolescents also have a tendency to react behaviorally to stress and therefore are more crime prone.

In accordance with the view of stress as a state of imbalance in which external or internal demands have exceeded the individual's adaptive resources (e.g., Monat and Lazarus, 1977; Novaco, 1979), it is evident that deviant adolescents have had more life changes which have required greater adaptation than nondeviant adolescents. One limitation in the present study is that it is not possible to separate those life change events which represent symptoms from those that are causes. A number of the life change events in the present study (e.g., "Ran away from home", "Getting grounded") represent symptoms rather than causes. As discussed by Dohrenwend and Dohrenwend (1978), this is an area which requires further research.

Considering the types of life changes that differentiate deviant from nondeviant youth (refer to Table 35), it is evident that all of these life events would be considered negative events. The events focus around such areas as school problems, family problems, losses through death and separation, and personal problems (drug or alcohol abuse, suicidal thoughts). The items related to family problems or conflicts indicate that not only parental divorce or separation distinguish deviant from nondeviant youth, but also other stressful family factors such as: "family member having trouble with alcohol", "family had money problems", "parents argued or fought continually". Secondly, the family problems have existed over a period of time, as most of the items had occurred in the past year as well as more than a year ago. The present results support those of Slater and Haber (1984) who reported that it was continual familial conflict rather than divorce per se that related to lower self-esteem, greater anxiety, and less feelings of control in adolescents. The items related to the family represented in the present study would indicate a high degree of family conflict.

Similarly, McCord (1979) found parental conflict to be one of six important variables, that had an impact on subsequent criminal behavior. McCord studied 201 boys who were followed up 30 years later, to determine their subsequent criminal activity. The study controlled for social status. While father absence did not distinguish criminals from noncriminals, six variables related to family atmosphere did. These included: mother's self-confidence, father's deviance, parental aggressiveness, maternal affection, supervision, and parental conflict. These variables were more accurate in predicting subsequent criminal activity than juvenile criminal records.

Early parental death has been related to a variety of psychological disturbances (Dietrich, 1984), including illegal offences (Markusen, and Fulton, 1971). Using the MMPI, Dietrich (1984) found that 50% of the individuals who lost a parent by death during childhood or adolescence had a serious psychological disturbance. The present results indicate that deviant adolescents have lost more fathers through death. Also, these youth have generally experienced more death e.g., death of friends, relatives, and for the noninstitutionalized (McMan) group, more sibling deaths.

Cognitive Appraisals

Holroyd and Lazarus (1982) state:

> We define stress relationally by reference to both the person and the environment. . . . At the psychological level . . . mediational processes involving evaluation and judgment are crucial to the stress reaction. Psychological stress requires a judgment that environmental and/or internal demands tax or exceed the individual's resources for managing them. This judgment and the individual's efforts to manage and shape the stress experience are conceptualized in terms of two processes: appraisal and coping. . . . (p. 22).

The present study attempted to assess how adolescents evaluated life change events in terms of level of emotional impact (upsetness), personal responsibility, and coping ability. The Regular Classroom group did not complete the Responsibility scale and therefore the results for this scale will be discussed in a subsequent section.

Both the Institutionalized (MYC) and the Noninstitutionalized (McMan) groups differed from the Regular Classroom group in assessing the emotional impact of the life events and their coping ability.

The deviant youth (Institutionalized and Noninstitutionalized) stated that the life change events were less upsetting than the nondeviant youth (Regular Classroom group). Mendez et al., (1980) also found that experience with an event influenced the level of upsetness. That is, adolescents who had experienced an event reported being less upset by the event than adolescents who had not experienced the event. The deviant adolescents in this study had experienced more life changes and also reported less emotional impact. A general conclusion is that a greater occurrence of life changes is associated with less stated emotional impact. One explanation for this result is that those who have not experienced as many life changes have an anticipatory fear of the occurence of these events. Those who have experienced many changes however, have to some extent had their fears extinguished and have become desensitized. It may also be argued that these youth are denying or repressing the impact of these events as a means of coping. As pointed out by Coyne and Lazarus (1980) the use of such defensive mechanisms can also be considered adaptive, e.g., use of denial to prevent being totally overwhelmed.

Deviant youth also perceive themselves as coping better than their nondeviant counterparts. Again, these youth have experienced more life change events and may equate coping with survival. Haan (1982) in addressing the issue of personal gains and losses of stress states:

> To rust out is seen, at least in this culture, as even less

> desirable than to burn out. Once the stress has passed, we relish telling stories of our war, surgery, and divorce. We imply that we have proven ourselves and are better and wiser for our experience (p. 255).

Another explanation is that these youth do not perceive any connection between their life circumstances and their present problems. That is, they do not perceive their present situation as indicative of maladaptive rather than adaptive functioning. It is clear that the present study does not provide the information necessary to determine the exact nature of the relationship between life changes and cognitive appraisals of these events for these youth. There are numerous factors to consider in determining this relationship as summarized by Coyne and Lazarus (1980):

> [I]n examining the role of a person's cognitive appraisal in a coping episode, we might look to the particular combination of personal and situational variables fused in the appraisal, whether it be threat, harm-loss, or challenge; the resultant patterns of emotion and coping efforts; and how these, along with environmental response, feed back to subsequent to subsequent appraisals. Therefore, we recognize a two-way street between cognition and emotion (p. 147).

Based on the present research it can only be stated that perceptions do differ between the two groups (deviant and nondeviant). The reasons for this difference are hypothetical at this point in time.

Locus of Control

The present results support previous research (e.g., Beck &

Ollendick, 1976; Kumchy & Sayer, 1980; Martin, 1975; Obitz et al., 1973) in showing that delinquent or deviant adolescents are significantly more external in their locus of control than nondeviant youth. Both the Institutionalized (MYC) and Noninstitutionalized (McMan) youth were more external on the locus of control measure than the Regular Classroom group.

Considering the life experiences of the deviant youth as compared with the Regular Classroom group it was evident that the deviant youth had experienced significantly more life changes (particularly those of a negative nature). Increases in number of life changes was significantly associated with more externality on the locus of control measure. That is, adolescents who experience more life changes, also feel less personal control over outcomes, than do adolescents with few life changes. Slater and Haber (1984), in studying the effects of only one stressor (high conflict in the home) reported that adolescents in high conflict homes were more external on a locus of control measure.

Adolescents who are less upset by life changes also tend to be more external on the locus of control measure. Or, conversely, those who report greater emotional impact also feel more in control of life's circumstances. This latter group would appear to be more inner-directed. However, it is important to reiterate that those adolescents have also had fewer negative life experiences, and therefore their perceptions have a different basis than those who report less emotional impact and less personal control.

Personality Types

Differentiating the deviant youth according to personality type revealed significant differences. As stated previously, only two of the four personality types (CP and PP) were able to be classified in sufficient numbers in order to be studied further. These two personality types are the same two identified in the research hypotheses as the most robust and important for study.

The Conduct Problem (CP) and Personality Problem (PP) youth were not differentiated according to life change events (either number or type). This was contrary to the stated hypothesis which expected that the Conduct Problem youth would have more past life changes, while the Personality Problem would have more recent life changes. As presented by Kahn (1971), the Conduct Problem youth have generally had a history of deviance since childhood, while the Personality Problem youth become deviant in their adolescent years. Given that this is frequently the case, it can be said that the early deviance of the Conduct Problem youth is not related to a greater number of life stressors (as measured in the present study).

The present results are also contrary to those which relate specific life events to personality configurations. For example, a number of authors (e.g., Felner et al., 1975; Melges & Bowlby, 1969; Tuckman & Regan, 1966) have linked death of a parent to the anxious, personality problem type, and divorce or separation to the antisocial, conduct problem type. The present results do not support those contentions.

Consistent with the stated hypothesis, the two groups (CP and PP) differed significantly in their perceptions of life change events. The CP group reported significantly less emotional impact, less personal responsibility, and better coping ability than the PP youth. These results are consistent with the characterizations of the CP and PP youth presented in the literature. As mentioned previously, the Conduct Problem youth represents the less extreme end of those characteristics describing the psychopathic personality. Cleckley's (1982) clinical profile of the psychopath includes such characteristics as: absence of "nervousness" or psychoneurotic manifestations, lack of remorse or shame, general poverty in affective reactions, poor judgement and failure to learn by experience, specific loss of insight, unreliability. This overall characterization is in marked contrast to the portrayal of the Personality Problem youth who demonstrates anxiety and depressive symptoms. Clinical research has shown that the antisocial and acting-out behaviors commonly labelled as "delinquent" may mask a depressive condition which would be a more appropriate diagnosis (Carlson & Cantwell, 1980; Chiles, Miller & Cox, 1980). It appears that the Personality Problem youth may fall into the category of the acting out youth who is conflicted with personal doubts and shows depressive symptoms. In considering the cognitive appraisals of each of the groups (CP and PP), these perceptions of life change events are consistent with their personality configurations.

Some clinical researchers have stated that the entire diagnosis of "Conduct Disorder" is a misnomer, particularly when the diagnosis is based primarily on the factor of aggression or violence (Lewis, Lewis, Unger & Goldman, 1984; Shanok, Malani, Ninan, Guggenheim, Weinstein, & Lewis, 1983). As stated by Lewis et al. (1984):

> [A]dolescents at sometime labelled as having a conduct disorder have a multiplicity of signs and symptoms

> characteristic of other psychiatric disorders. . . . The one characteristic they share is aggressiveness. However, violence, like fever, is a nonspecific symptom and may be present in varying degrees in a number of syndromes, including schizophrenia, manic-depressive disorder, and certain forms of epilepsy and brain damage. (p. 518)

This could put into question the Conduct Problem categorization as well, although in the present study it is based not only on behavioral observations which include aggressiveness but also on self-reported attitudes (POS).

In contrast, Pfeffer, Plutchik and Mizruchi (1983) identify two basic groups of children who are referred for psychiatric attention. Pfeffer et al. (1983) state:

> One is a group characterized by minimal degrees of aggression, good reality testing, intellectualization as an ego defense, neurosis and depression. The second group is characterized by intense aggression, deficits in reality testing, compensation as a frequent ego defense, and multiple acting-out behaviors. (p. 156)

The issue of a diagnostic classification based primarily on aggressive tendencies remains open to debate and further research. The present results indicate that within a deviant population, it is possible to identify at least two subgroupings, one showing more aggressive, irritable, and irresponsible attitudes and behaviors, and the other presenting more anxious and depressive attitudes and behaviors. It would appear that the Conduct Problem group focuses outward in making sense of negative life experiences, while the Personality Problem group focuses inward.

The CP and PP group did not differ on the locus of control measure, as was predicted. As will be discussed, there were some differences when each of these groups was compared with the Regular Classrom group.

In comparing each of the personality categories (CP and PP) with the Regular Classroom group, the differences in the two categories were again very evident. The Personality Problem group differed from the Regular Classroom group in that they had experienced more life changes, in the past and in the last year. As the events were primarily negative, the PP youth were under greater stress in having to cope with these negative events. Consistent with these many life changes was the finding that the PP youth felt more out of control of life circumstances (more external on the locus of control measure) than the Regular Classroom group. Many of the events these youth experienced were beyond their personal control and so it would follow that they would perceive little relationship between their behaviors and outcomes. Despite the many life changes and general feelings of lack of control, the PP youth appraised the life change events in a way similar to the Regular Classroom group. That is they did not differ in terms of perceived emotional impact and coping ability.

In contrast, the CP youth presented quite a different picture when compared with the Regular Classroom group. These youth (CP) had significantly more recent life change events than the Regular Classroom group but reported significantly less emotional impact and better coping ability. They did not report feeling less out of control as measured by the locus of control measure. In comparing each of these groups with the Regular Classroom group, the personality differences are more sharply contrasted.

The foregoing is supportive of the view that we cannot view deviant or delinquent adolescents as a homogeneous group. As identified in the present study, two distinct groupings are evident. Whether these represent very broad categories is a question for further investigation. The present study does indicate the utility of attempting to identify subgroupings and exploring further how these groups employ different defense mechanisms to cope with life's circumstances. Wolff (1984) in addressing the issue of delinquent and conduct disordered youth who show neurotic symptoms versus those who do not, pointed out the better prognosis for those who have neurotic symptoms. Wolff speculates differences in supports and emotional traumas and states:

> . . . [C]onduct disordered children without neurotic symptoms might have had to use more massive psychological defenses with permanently adverse effects on their personality structure. (p. 11)

The present results show no difference in type of life change events as measured by the present instruments, although there a number of items which were not directly included, e.g., sexual or physical abuse. However, it is clear that those who fall into the Personality Problem category, are more like "normal" adolescents in their perceptions, and hence may have a better prognosis. As presented by Rankel (1980) the neurotic group (Personality Problem) may be able to benefit the most from their experiences because they have the insight and awareness to do so. The Conduct Problem youth contrasts sharply in their apparent lack of insight and inability to learn from experiences. In the extreme this takes the form of the psychopathic personality characterized by egocentric, impulsive stimulation-seeking behaviors and an inability to modify behavior based on either rewards or punishments (Quay, 1965). Noshpitz (1984) in relating narcissism and aggression states:

> . . . [T]he most serious delinquent patterns are seen in young people with profound emotional fixations at this level of early narcissistic development. The grandiosity, the arrogance, the unrealistic assertions of entitlement expressed by those teenagers carry forward just this childhood picture. The poor judgment, the infantile quality of their interactions and the lack of guilt complete the formula and speak volumes for the role of developmental arrest in the phenomenology of aggressive behavior. (p. 33)

Nospitz's (1984) description is very much the portrayal of the conduct problem youth as has been described in the literature and in the present research. In conclusion, there does appear to be support for looking beyond the label of "delinquent" or "antisocial youth" to subgroupings based on basic differences in attitudes, behaviors, and perceptions.

Gender and Age Differences

The exploration of gender differences was not a focal area in this research. Gender was controlled by treating it as a blocked factor in the design. Gender differences were evident on two variables.

In comparing the three groups, MYC, McMan and the Regular Classroom, females were more upset by the life change events than males. This result is consistent with those reported by Mendez et al. (1980).

As presented in Appendix A, previous research showed females tend to be less external than males on the locus of control measure; this was true for both deviant and nondeviant adolescents. In the present study no significant gender differences were found between Regular Classroom youth and Institutionalized or Noninstitutionalized deviant youth. However, for adolescents that could be clearly identified in the CP and PP categories, females tended to be more external on the locus of control measure. This is a factor that should be taken into consideration whenever studying the personality categorizations of deviant youth.

Age was treated as a covariate in the analysis of variance. It was significantly related to only two of the dependent measures: a small positive correlation was found with Life Change events (more than a year ago) and a small negative correlation with Locus of Control. The relationship with life change events is in keeping with results presented by Coddington (1972b) and Mendez et al. (1980), and makes sense in that older adolescents would have accumulated more events. The relationship between age and locus of control is consistent with previous results presented by Gilmor (1978). The correlation may be smaller because there is a possibility of a curvilinear relationship: there is some evidence that the most external locus of control scores occur at ages 13 through 15, and are lower both before and after this age.

A Developmental and Change-Loss Perspective

The purpose of this study was to examine the relationship between adolescent deviance and life stress (change) events. The foregoing discussion presented results which are consistent with the view that adolescents who have been identified as antisocial have experienced significantly more life changes than adolescents who have not been identified as antisocial. Further, the adolescents identified as antisocial have different perceptions of the life events and are more external on a measure of locus of control. Within the antisocial group, there are differences in perceptions of events according to personality classification. In order to gain a conceptual understanding of the present results, it is necessary to put them into the broader framework of the "adolescent developmental process". That is, to reconcile these findings with the various tasks and characteristics of this stage of development.

As described by Wolkind and Coleman (1976), the adolescent period is characterized by change and transition. These changes occur at all levels of development--biological, cognitive, affective, and social. For example, in addition to the biological changes there are a variety of psychological changes in intellectual growth in the form of abstract thinking and in emotional needs of security and independence. The adolescent must accomplish tasks related to social, sexual, moral, and occupational funtioning. Although there are age variations within the process, i.e., the tasks of a twelve year old are not the same as those of an eighteen year old, the central theme of adolescence is identity formation (Erickson, 1968). Identity formation involves a synthesis of all the adolescent has learned about himself/herself in childhood into a concept of self which makes sense, that is, shows continuity with the past, while preparing for the future. Identity confusion results from an inability to find meaningful attachments or an overall purpose. In addition, the adolescent has a tendency to act. Mitchell (1978) states that adolescents must cope with many day-to-day problems which are similar to those faced by adults, but that they do so with "existential urgency". Mitchell describes adolescents as "physical, sensual, and hyperactive" (1979, p. 3). Adolescents tend to be egocentric, have fears of the future, and resent adults who do not acknowledge their integrity and personal identity. They also have needs for acceptance, self assertion, achievement, competence, and role experimentation (Mitchell, 1979).

Taking all these factors into consideration it can be hypothesized that life change events (particularly those of a negative nature) create additional stress at a time of life already characterized by change and transition. The change and loss associated with negative life events is unstabilizing and breaks the continuity with what has been familiar and known, adding to a sense of confusion. Further, the adolescents' "acting out" behaviors in response to stress are consistent with a "natural" tendency at this stage of development. As adolescents typically question the authority and values of the older generation, it is also logical that the antisocial behaviors take the form of violation of society's norms.

The present research also demonstrated that in addition to differences in number and type of life changes events, adolescents labelled deviant perceive life events differently from nondeviant adolescents. That is, deviant adolescents report less emotional impact and better coping ability than nondeviant adolescents. As discussed earlier, these results can be interpreted from a number of perspectives, e.g., behavioral, cognitive, psychodymamic. From a developmental perspective, it is possible to view these reactions as coping (defense) mechanisms which have some adaptive functions. That is, these reactions (e.g., denial, distortion) allow the adolescent to survive and maintain some sense of self. The reactions can be considered harmful if they become more permanent ways of dealing with life's difficulties, and lead to what Erikson (1968) calls a "negative identity" or Glasser (1975) terms a "failure identity". In assessing the differences within the deviant population, it might be hypothesized that those in the Conduct Problem (CP) category have a more solidified negative or failure identity. The Personality Problem (PP) youth despite similar life experiences perceive these events in a manner similar to the nondeviant youth. The precise dynamics which create these differences are unknown, but it would appear that the Personality Problem youth may be more immediately receptive to intervention.

As adolescents attempt to make sense of their world and the place they have in it, it follows that those who have experienced many negative life changes would not perceive a great deal of personal control—things happen to them rather than being a consequence of their actions. It appears that some adolescents may feel responsible but helpless to bring about any changes, e.g., this typifies those in the PP group, while some would place the blame on others, e.g., typical of the CP group.

Questions should be posed concerning whether negative life events lead to long-term difficulties and whether antisocial behavior in adolescence signals a life of criminality. The longitudinal evidence with respect to the first question is limited. However, as indicated in Chapter II, significant relationships have been found between life change events and a variety of psychological and physical disorders (e.g., Barrett, 1979; Rutter, 1981; Vincent & Rosenstock, 1979). A study presented by Livson and Peskin (1980) discussed longitudinal evidence which indicates that a life change event such as divorce may be more overwhelming for the child than the adolescent. They consider that the adolescent, as a result of the divorce, may be able to achieve earlier a more realistic acceptance of personality differences and the capacity to separate and become autonomous. It appears that other factors besides age might be involved in such an effective resolution, e.g., the manner in which the divorce process was handled, the support systems available. However, this view does acknowledge the resources and adaptive capacities of adolescence.

As presented in Chapter II, a small amount of research has indicated that behavioral difficulties in childhood and adolescence can be signals for adult criminality or psychiatric disorders (e.g., Mitchell & Rosa, 1981; Russell & Hardman, 1980). With respect to criminality it appears, however, that only those who are most severely delinquent become deviant in adulthood (Gold & Petrinio, 1980). While this is encouraging, it appears that the effects in terms of psychological distress and hardship are largely unknown at this time. Also, at an individual level it is often impossible to make accurate predictions.

Are there any answers? One direction which seems important is intervention with adolescents at the time at which the changes (and often crises) are being experienced. In viewing life change from the perspective of coping with disruptions of the familiar, and the associated losses and grieving (Heikkinen, 1981; Klinger, 1977; Marris, 1974), it is important to assist adolescents in coping with their life change (stress) events. Given that adolescence is a time of change, it follows that effective resolution of these changes can contribute to a positive identity formation. Kobasa's (1979) study with adults indicated that in order to deal effectively with life stress one required such characteristics as deep commitment; a clear sense of values, goals, and capabilities; a sense of meaningfulness; and a belief of control over the events of experience. Our knowledge of adolescence indicates that it is those very issues with which adolescents wrestle. Therefore, as they experience stressful events they require support and assistance. As stated by Mitchell (1979):

> Adolescents require someone in whom they can confide in times of personal crises . . . . Adjustment crises, of all types and for all ages, are especially difficult to handle without helpers. Unfortunately, the life-style of the immature adolescent tends to distance people rather than to bring them close (p. 135).

Marris (1974) points out that when a change occurs which disrupts the continuity of life, there exists the potential for both despair and innovation. In the short-term the despair needs to be acknowledged. Perhaps the "acting out" of adolescents is a function of this despair and confusion. The long-term goal of intervention is to assist the adolescent with the innovative aspects. This includes achieving a sense of mastery and competence in dealing with life's difficulties. Change and loss are perceived as aspects of living which cause pain and grief, but which can be acknowledged and coped with rather than denied, distorted, and avoided.

Implications of the Research

The present research is suggestive of the view presented by Marohn (1979) and Schlesinger and Revitch (1980) that adolescents deal with their emotional problems behaviorally. It is clear from the present study that adolescents who have been labelled antisocial or delinquent experience significantly more life changes (primarily of a negative nature) than those not so identified. One implication from the present research is that scales such as the MALCES can be used in a predictive/preventive manner to identify adolescents "at risk". As elaborated in the previous section, therapeutic intervention at the time changes or crises are occurring can assist adolescents in effective resolutions.

Second, in considering various types of life change events, further research might address additional items specifically related to physical and sexual abuse, deviance, and psychopathology within the family, and family dynamics. Parental deviance or psychopathology has been related to emotional and behavioral difficulties by a number of researchers, (e.g., Chiles et al., 1980; McCord, 1979; O'Neal, Robins, King & Schaefer, 1962). A recent study by Loeber and Dishion (1984) has reiterated the need to explore family dynamics. Loeber and Dishion (1984) found that boys who were fighters (antisocial) both at home and school (as opposed to boys who fought in only one setting or not at all) were exposed to poorer child-rearing conditions, were more likely to be rejected by their parents, experienced more marital discord in the family, and came from families with poor problem-solving skills. As discussed earlier, items in the present research dealt generally with a number of these difficulties, e.g., "parents argued or fought continually", "family member having trouble with alcohol", but did not deal with specifics. However, the analysis of events which differentiated deviant from nondeviant adolescents clearly showed differentiation on items dealing with difficult family situations, losses, and school problems, which could be explored to a greater degree.

The present research also indicates the utility of exploring the area of cognitive appraisals and attributions with deviant adolescents. Differences have been demonstrated between deviant and nondeviant youth, as well as within the deviant population. While the present study made only a cursory examination of how adolescents appraise events, it is clear that this is a useful avenue in terms of specific causal attributions, as well as more generally in terms of a cognitive framework or "life-view". The distinctions between the CP and PP youth indicated very different perspectives. Templeman and Wollersheim (1979) in advocating a cognitive-behavioral approach for the treatment of psychopathics, stated that this treatment differs in that:

> "[I]t is primarily concerned with how the psychopath thinks and what he believes about himself and the world. It is based on the assumption that therapy will be more successful if it operates within the

psychopaths own cognitive framework. (p. 134)

The present study supports this view in that it is necessary to find out more about how Conduct Problem as well as Personality Problem youth interpret their life experiences and their world, in order to find more effective ways of helping these youth. It is also important to know how these youth differ from "normal" adolescents who have not had the same behavioral or emotional difficulties. Some of this information would require a procedure such as a structured interview to provide more detailed data.

It has also been suggested that attributional styles, such as may be obtained from the above, may not be consistent across situations. Cutrona, Russell, and Jones (1985) review the cross-situational consistency of causal attributions (specifically related to depression) and state that instead of looking for an attributional style, future research should examine causal attributions for specific negative life events. Another useful avenue of reseach would be to look at specific events and determine not only the causal attributions and appraisals of these negative events, but the specific coping mechanisms used to deal with these events. This would provide a clearer picture of how specific events or the accumulation of a number of events lead to particular coping behaviors.

The present study has also shown that deviant adolescents are not a homogeneous group, and that certain classifications of deviant adolescents, i.e., Conduct Problem and Personality Problem can be shown to differ on a number of variables. It is also clear that classification of deviant adolescents into personality types is not an easy task. Only of four possible categories were clearly identified in this research. It would seem that a multi-method approach (e.g., self-report, behavioral observations, and case histories) is preferable, although as shown the consistency across methods is a problem. Therefore, there is a need for further refinement of the instruments used.

Research into the effect of life stress on deviant adolescents is relatively recent. It is evident that future work needs to address more specifically the interaction of personality characteristics, adolescent life stress events, and cognitive appraisals of these events on adolescent deviance and coping behaviors.

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Appendix A

Procedure for Determining the Sample Size

Provided below is a table of the summary of means and variances form relevant groups. The appropraite estimate of the error variance is the weighted average of variances for males and females separated and within deviant and nondeviant groups: 18.307. Since the main hypothesis for locus of control concerned differentiating deviants and nondeviants the difference between these groups was estimated from the same studies, again controlling for gender: mean of deviants was 16.75 and 15.77 and of nondeviants was 13.52 and 12.71 for males and females respectively. Thus, differences of 3.23 (males) and 3.06 (females) can be expected. Using .80 as the level of power and Myers (1972) method for determining the size of "n", a sample size of 35 is required for each of the deviant and nondeviant groups.

Table A-1

Summary of Means and Variances for Nondeviant and Deviant Adolescents on the Nowicki-Strickland Scale (CNS-IE)[a]

Groups	Gender	M	N	s^2	N-1
Nondeviant	Male	13.52	283	16.46	157
	Female	12.71	206	18.57	137
	Total	13.14	512	17.49	318
Deviant	Male	16.75	83	19.59	54
	Female	15.77	49	23.30	48
	TotaL	15.67	411	24.30	382

[a] Obtained from studies reported in the CNS-IE manual.

Appendix B

Test-Retest and Interrater Reliability Data for the BPC

The following tables present estimates for the reliabilities of BPC subscales across various raters and time intervals.

Table B-1

Interrater and Retest Reliabilities for the BPC[a]

(n=50)

	Interrater Reliability		Two-Week Test-Retest Reliability		
			Same Rater	Rater 1 and 2	
BPC Subscale	After 1 week	After 3 weeks	Rater 1	Rater 2	Combined
CP	.68	.59	.62	.68	.70
PP	.20	.59	.31	.64	.62
II	.06	.05	.30	.54	.46
SD	.17	.16	.53	.48	.51
"Flag"	.67	.35	.59	.13	.51

[a] Obtained from Kelley (1981).

Appendix C

Modified Adolescent Life Change Event Scale (MALCES)

Part I of the MALCES comprises 50 life change event items. Subjects were requested to indicate whether the event had occured "within the past year" and also whether the event had occurred "more than a year ago" by circling "Yes" or "No" to each item for the two scales separately.

Part II of the MALCES comprises 3 Likert-type response scales. Subjects were requested to appraise each event on Part I according to level of emotional impact (Upsetness scale), level of responsibility (Responsibility scale), and perceived coping ability (Coping scale).

Adolescent Life Change Event Questionnaire - Modified

PART I:

Instructions:

(a) Read over each event listed below and think if this event has happened to you in the past year. If this event has happened to you in the past year, circle Yes in the first column; if this event has not happened to you in the past year, circle No in the first column.

(b) Next, think if this event happened to you more than a year ago. If this event happened to you more than a year ago, circle the Yes in the second column; if this event did not happen to you more than a year ago, circle the No in the second column.

Example:

	COLUMN 1 WITHIN PAST YEAR		COLUMN 2 MORE THAN A YEAR AGO	
1. Being sick in the hospital	Yes	No	Yes	No

For example, if you were sick in the hospital 6 months ago, you would circle the Yes under the first column, "within the past year". If you were not sick in the hospital in the last 12 months you would circle the No under the first column.

Next, if you were sick in the hospital 3 years ago, you would circle the Yes under the second column, "more than a year ago". If you have never been sick in the hospital in the past (more than a year ago), you would circle the No under the second column.

It could happen that you were sick in the hospital within the past year and that you were also sick in the hospital before a year ago (say 2 years ago). If this were true you would circle the Yes under the first column and Yes under the second column.

(c) Extra space is provided at the end of the list for you to write in other events that are not on the list that you think should be included.

YOU MAY TURN THE PAGE AND BEGIN

	HAPPENED TO YOU			
	COLUMN 1 WITHIN PAST YEAR		COLUMN 2 MORE THAN A YEAR AGO	
1. Hassling with parents	Yes	No	Yes	No
2. Change in physical appearance (braces, glasses)	Yes	No	Yes	No
3. Problems with dating	Yes	No	Yes	No
4. Starting a new school	Yes	No	Yes	No
5. Hassling with brother or sister	Yes	No	Yes	No
6. Getting into drugs or alcohol	Yes	No	Yes	No
7. Losing a favorite pet	Yes	No	Yes	No
8. Mother getting pregnant	Yes	No	Yes	No
9. Moving to a new home	Yes	No	Yes	No
10. Failing one or more subjects in school	Yes	No	Yes	No
11. Death of mother	Yes	No	Yes	No
12. Being arrested by the police	Yes	No	Yes	No
13. Having someone new move in with your family (grandparent, adopted brother or sister, or other)	Yes	No	Yes	No
14. Parent losing a job	Yes	No	Yes	No
15. Getting badly hurt or sick	Yes	No	Yes	No
16. Quitting school	Yes	No	Yes	No
17. Brother or sister dying	Yes	No	Yes	No
18. Brother or sister getting married	Yes	No	Yes	No
19. Family member (other than yourself) having trouble with alcohol	Yes	No	Yes	No
20. Close girlfriend getting pregnant	Yes	No	Yes	No
21. Breaking up with a close girlfriend or boyfriend	Yes	No	Yes	No
22. Parents getting divorced or separated	Yes	No	Yes	No
23. Parent or relative in your family (other than yourself) getting very sick	Yes	No	Yes	No

		HAPPENED TO YOU			
		COLUMN 1 WITHIN PAST YEAR		COLUMN 2 MORE THAN A YEAR AGO	
24.	Close friend dying	Yes	No	Yes	No
25.	Trouble with teacher or principal	Yes	No	Yes	No
26.	Flunking a grade in school	Yes	No	Yes	No
27.	Making new friends	Yes	No	Yes	No
28.	Problems with menstrual periods (for girls)	Yes	No	Yes	No
29.	Starting a job	Yes	No	Yes	No
30.	Losing a job	Yes	No	Yes	No
31.	Problems with acne	Yes	No	Yes	No
32.	Wrecking the car	Yes	No	Yes	No
33.	Getting grounded	Yes	No	Yes	No
34.	Not making an extracurricular activity (i.e., athletic team, band, etc.)	Yes	No	Yes	No
35.	Death of father	Yes	No	Yes	No
36.	Problems with size (too tall, too short, too heavy)	Yes	No	Yes	No
37.	Sister getting pregnant	Yes	No	Yes	No
38.	Brother getting someone pregnant	Yes	No	Yes	No
39.	Death of a relative (such as grandparent, cousin, uncle, etc.)	Yes	No	Yes	No
40.	Getting pregnant/getting someone pregnant	Yes	No	Yes	No
41.	Ran away from home	Yes	No	Yes	No
42.	Separated, divorced, or widowed parent dating	Yes	No	Yes	No
43.	Increased pressure from friends	Yes	No	Yes	No
44.	Thought about suicide	Yes	No	Yes	No
45.	Parent/relative in serious accident	Yes	No	Yes	No

	HAPPENED TO YOU			
	COLUMN 1 WITHIN PAST YEAR		COLUMN 2 MORE THAN A YEAR AGO	
46. Family had money problems ------------------	Yes	No	Yes	No
47. Parents argued or fought continually ------	Yes	No	Yes	No
48. Stole something valuable ------------------	Yes	No	Yes	No
49. Finding out about being adopted -----------	Yes	No	Yes	No
50. Parent remarrying ------------------------	Yes	No	Yes	No
51. Others (write in) ____________________ ______________________________	Yes	No	Yes	No
52. Others (write-in) ____________________ ______________________________	Yes	No	Yes	No

PART II: Listed on the following pages are events that may or may not have happened in your life. We want to find out how you feel and what you think about these events. There are three sections (Section A, Section B, & Section C) to Part II.

Section A: In this first section you are asked to say how upsetting each event would be to you. The following scoring system will be used: a) not at all upset, b) a little upset, c) somewhat upset, d) very upset, e) extremely upset.

In reading each event check (✓) the box which is the same as how upset you would feel.

For Example:

	Not At All Upset	A Little Upset	Somewhat Upset	Very Upset	Extremely Upset
Losing a favorite pet	✓				

If losing your favorite pet is extremely upsetting to you, you would put a check (✓) in the box that says "extremely upset". If it would not upset you at all, you would put a check (✓) in the box that says "not at all upset".

Extra space is provided at the end for you to write in other events that are not on the list and that you may have added to the list of events in Part I. After writing in those events, check (✓) the box that is the same as how upset you would feel.

Check only one box for each event.

You may turn the page and begin.

✓

ITEMS	Not At All Upset	A Little Upset	Somewhat Upset	Very Upset	Extremely Upset
1. Hassling with parents					
2. Change in physical appearance (braces, glasses)					
3. Problems with dating					
4. Starting a new school					
5. Hassling with brother or sister					
6. Getting into drugs or alcohol					
7. Losing a favorite pet					
8. Mother getting pregnant					
9. Moving to a new home					
10. Failing one or more subjects in school					
11. Death of mother					
12. Being arrested by the police					

ITEMS	Not At All Upset	A Little Upset	Somewhat Upset	Very Upset	Extremely Upset
13. Having someone new move in with your family (grandparent, adopted brother or sister, or other)					
14. Parent losing a job					
15. Getting badly hurt or sick					
16. Quitting school					
17. Brother or sister dying					
18. Brother or sister getting married					
19. Family member (other than yourself) having trouble with alcohol					
20. Close girlfriend getting pregnant					
21. Breaking up with a close girlfriend or boyfriend					
22. Parents getting divorced or separated					
23. Parent or relative in your family (other than yourself) getting very sick					
24. Close friend dying					

ITEMS	Not At All Upset	A Little Upset	Somewhat Upset	Very Upset	Extremely Upset
25. Trouble with teacher or principal					
26. Flunking a grade in school					
27. Making new friends					
28. Problems with menstrual periods (for girls)					
29. Starting a job					
30. Losing a job					
31. Problems with acne					
32. Wrecking the car					
33. Getting grounded					
34. Not making an extracurricular activity (i.e., athletic team, band, etc.)					
35. Death of father					
36. Problems with size (too tall, too short, too heavy)					

ITEMS	Not At All Upset	A Little Upset	Somewhat Upset	Very Upset	Extremely Upset
37. Sister getting pregnant					
38. Brother getting someone pregnant					
39. Death of a relative (such as grandparent, cousin, uncle, etc)					
40. Getting pregnant / Getting someone pregnant					
41. Ran away from home					
42. Separated, divorced or widowed parent dating					
43. Increased pressure from friends					
44. Thought about suicide					
45. Parent or relative in serious accident					
46. Family had money problems					
47. Parents argued or fought continually					
48. Stole something valuable					

ITEMS	Not At All Upset	A Little Upset	Somewhat Upset	Very Upset	Extremely Upset
49. Finding out about being adopted					
50. Parent remarrying					
51. Others (write in)					
52. Others (write in)					

Section B: In this section you are asked to say how responsible you would feel for each event. That is, how much you would feel the cause of the event. The following scoring system will be used: a) not at all responsible, b) a little responsible, c) somewhat responsible, d) very responsible, e) totally responsible.

In reading each event check (✓) the box which is the same as how responsible you would feel.

For Example:

	Not At All Responsible	A Little Responsible	Somewhat Responsible	Very Responsible	Totally Responsible
Getting grounded					

If you think you would be totally responsible if you were grounded, you would put a check (✓) in the box that says "Totally Responsible". If you think you would be a little responsible for getting grounded, you would put a check (✓) in the box that says "A Little Responsible".

Extra space is provided at the end for you to write in other events that are not on the list and that you may have added to the list of events in Part I. After writing in those events, check (✓) the box that is the same for how responsible you would feel.

Check only one box for each event.

You may turn the page and begin.

ITEMS	Not At All Respon-sible	A Little Respon-sible	Somewhat Respon-sible	Very Respon-sible	Totally Respon-sible
1. Hassling with parents					
3. Problems with dating					
4. Starting a new school					
5. Hassling with brother or sister					
6. Getting into drugs or alcohol					
7. Losing a favorite pet					
9. Moving to a new home					
10. Failing one or more subjects in school					
11. Death of mother					
12. Being arrested by the police					

ITEMS	Not At All Respon-sible	A Little Respon-sible	Somewhat Respon-sible	Very Respon-sible	Totally Respon-sible
14. Parent losing a job					
15. Getting badly hurt or sick					
16. Quitting school					
17. Brother or sister dying					
19. Family member (other than yourself) having trouble with alcohol					
20. Close girlfriend getting pregnant					
21. Breaking up with a close girlfriend or boyfriend					
22. Parents getting divorced or separated					
23. Parent or relative in your family (other than yourself) getting very sick					
24. Close friend dying					

ITEMS	Not At All Respon-sible	A Little Respon-sible	Somewhat Respon-sible	Very Respon-sible	Totally Respon-sible
25. Trouble with teacher or principal					
26. Flunking a grade in school					
27. Making new friends					
29. Starting a job					
30. Losing a job					
31. Problems with acne					
32. Wrecking the car					
33. Getting grounded					
34. Not making an extracurricular activity (i.e., athletic team band, etc.)					
35. Death of father					
36. Problems with size (too tall, too short, too heavy)					

ITEMS	Not At All Respon- sible	A Little Respon- sible	Somewhat Respon- sible	Very Respon- sible	Totally Respon- sible
37. Sister getting pregnant					
38. Brother getting someone pregnant					
39. Death of a relative (such as grandparent, cousin, uncle, etc.)					
40. Getting pregnant / Getting someone pregnant					
41. Ran away from home					
43. Increased pressure from friends					
44. Thought about suicide					
45. Parent or relative in serious accident					
46. Family had money problems					
47. Parents argued or fought continually					
48. Stole something valuable					

ITEMS	Not At All Responsible	A Little Responsible	Somewhat Responsible	Very Responsible	Totally Responsible
50. Parent remarrying					
51. Others (write in)					
52. Others (write in)					

Section C: In this last section you are asked to say how well you think you would deal with (manage or cope with) each event in comparison to others your age. The following scoring system will be used: a) deal with much better than others, b) deal with better than others, c) deal with about the same as others, d) deal with worse than others, e) deal with much worse than others.

In reading each event check (✓) the box which is the same as how you think you would deal with the event.

For Example:

	Deal With Much Better Than Others	Deal With Better Than Others	Deal With About The Same As Others	Deal With Worse Than Others	Deal With Much Worse Than Others
Making new friends					

If you think you would deal with making new friends better than others, you would put a check (✓) in the box that says "Deal With Better Than Others". If you think you would deal with making new friends much worse than others, you would put a check (✓) in the box that says "Deal With Much Worse Than Others".

Extra space is provided for you to write in other events that are not on the list and that you may have added to the list of events in Part I. After writing in those events, check (✓) the box that is the same as how well you think you would deal with the event.

Check only one box for each event.

You may turn the page and begin.

ITEMS	Deal With Much Better Than Others	Deal With Better Than Others	Deal With About The Same As Others	Deal With Worse Than Others	Deal With Much Worse Than Others
1. Hassling with parents					
2. Change in physical appearance (braces, glasses)					
3. Problems with dating					
4. Starting a new school					
5. Hassling with brother or sister					
6. Getting into drugs or alcohol					
7. Losing a favorite pet					
8. Mother getting pregnant					
9. Moving to a new home					
10. Failing one or more subjects in school					
11. Death of mother					
12. Being arrested by the police					

ITEMS	Deal With Much Better Than Others	Deal With Better Than Others	Deal With About The Same As Others	Deal With Worse Than Others	Deal With Much Worse Than Others
13. Having someone new move in with your family (grandparent, adopted brother or sister, or other)					
14. Parent losing a job					
15. Getting badly hurt or sick					
16. Quitting school					
17. Brother or sister dying					
18. Brother or sister getting married					
19. Family member (other than yourself) having trouble with alcohol					
20. Close girlfriend getting pregnant					
21. Breaking up with a close girlfriend or boyfriend					
22. Parents getting divorced or separated					
23. Parent or relative in your family (other than yourself) getting very sick					
24. Close friend dying					

ITEMS	Deal With Much Better Than Others	Deal With Better Than Others	Deal With About The Same As Others	Deal With Worse Than Others	Deal With Much Worse Than Others
25. Trouble with teacher or principal					
26. Flunking a grade in school					
27. Making new friends					
28. Problems with menstrual periods (for girls)					
29. Starting a job					
30. Losing a job					
31. Problems with acne					
32. Wrecking the car					
33. Getting grounded					
34. Not making an extracurricular activity (i.e., athletic team, band, etc.)					
35. Death of father					
36. Problems with size (too tall, too short, too heavy)					

ITEMS	Deal With Much Better Than Others	Deal With Better Than Others	Deal With About The Same As Others	Deal With Worse Than Others	Deal With Much Worse Than Others
37. Sister getting pregnant					
38. Brother getting someone pregnant					
39. Death of a relative (such as grandparent, cousin, uncle, etc.)					
40. Getting pregnant / Getting someone pregnant					
41. Ran away from home					
42. Separated, divorced or widowed parent dating					
43. Increased pressure from friends					
44. Thought about suicide					
45. Parent or relative in serious accident					
46. Family had money problems					
47. Parents argued or fought continually					
48. Stole something valuable					

ITEMS	Deal With Much Better Than Others	Deal With Better Than Others	Deal With About The Same As Others	Deal With Worse Than Others	Deal With Much Worse Than Others
49. Finding out about being adopted					
50. Parent remarrying					
51. Others (write in)					
52. Others (write in)					

Appendix D

Background Information Sheets

Included are the "Background Information" sheets as provided to the counsellors at MYC and the youth workers at McMan. The first (p. 224), was designed for the MYC sample; the second (p. 225) was designed for the McMan sample. The counsellors and youth workers were requested to complete the data sheets based on the referral and case history information available for each subject.

BACKGROUND INFORMATION

1. STUDENT CODE NUMBER: ________

2. ADMISSION DATE: ____________________

3. DELINQUENCY INFORMATION: Alleged Offence ____________________

____

Previous Delinquent Involvement ________

____

____

4. SCHOOL INFORMATION: ____________________________________

____

____

5. PSYCHOLOGICAL OR EDUCATIONAL ASSESSMENTS: ______________

____

____

6. OCCUPATIONS OF PARENTS OR GUARDIANS:

Mother ____________________ Father ____________________

7. OTHER SIGNIFICANT INFORMATION: e.g., single-parent family; specific family school, medical or behavioral information, etc.

____

____

____

____

BACKGROUND INFORMATION

1. STUDENT CODE NUMBER: __________

2. DATE OF REFERRAL: ____________________

3. REASON FOR REFERRAL: ____

____

4. LEGAL STATUS: Probation Only ______ Family Support ______

T. W. (JDA) ______ T. W. (CWA) ______ P. W. ______

5. DELINQUENCY INFORMATION: No Involvement ______ Pending ______

Previous Court Appearances ______

6. SCHOOL INFORMATION: ____

____

7. PSYCHOLOGICAL OR EDUCATIONAL ASSESSMENTS: ________________________

____

8. OCCUPATIONS OF PARENTS OR GUARDIANS:

Mother ____________________ Father ____________________

9. OTHER SIGNIFICANT INFORMATION: e.g., single-parent family; residing outside of home; specific family, school, medical, behavioral information, etc.

____

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